

APPROVED
BY THE CITY COUNCIL

JUN 17 1997

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DEPARTMENT OF
UTILITIES
ENGINEERING SERVICES

CITY OF SACRAMENTO
CALIFORNIA

May 19, 1997

City Council
Sacramento, California

Honorable Members in Session:

**SUBJECT: SUMP 2 REHABILITATION AND IMPROVEMENT PROJECT (PN: XM24):
TRANSFER FUNDS AND EXECUTE SUPPLEMENTAL AGREEMENT NO. 1 TO
THE CONSULTANT SERVICES AGREEMENT WITH MONTGOMERY WATSON
AMERICAS, INC., FOR PHASE 2 - FINAL DESIGN AND TECHNICAL SERVICES
DURING CONSTRUCTION FOR AN AMOUNT NOT TO EXCEED \$2,432,000**

LOCATION AND COUNCIL DISTRICT:

The project is located at the Sump 2 facilities within the combined sewer system, Riverside Boulevard and 11th Avenue (see attached map). (District 4)

RECOMMENDATION:

Staff recommends that the City Council transfer funds from the Combined System Reserve and authorize the City Manager to execute Supplemental Agreement No. 1 to the Consultant Services Agreement with Montgomery Watson Americas, Inc., for Sump 2, Phase 2 - Final Design and Technical Services during construction for an amount not to exceed \$2,432,000.

CONTACT PERSON: Gary A. Reents, Engineering Services Manager, 433-6633
Rick Batha, Senior Engineer, 433-6625

FOR COUNCIL MEETING OF: June 17, 1997

SUMMARY

A consultant services agreement with Montgomery Watson Americas, Inc., for Phase 1 - Design Development services for rehabilitation and improvement of Sump 2 was approved by Council on February 4, 1997. Supplemental Agreement No. 1 for Phase 2 - Final Design and Technical Engineering Services During Construction has been negotiated for an amount not to exceed \$2,432,000.

City Council
May 19, 1997
Supplemental Agreement No. 1 (PN: XM24)

COMMITTEE/COMMISSION ACTION

None.

BACKGROUND INFORMATION

In June 1990 the Regional Water Quality Control Board (RWQCB) issued a Cease and Desist Order requiring the City to eliminate outflows from the Combined Sewer System (CSS). The City responded by preparing a plan to comply with the order. In July 1995 Council authorized the Department of Utilities to submit the Combined System Improvement Plan to the RWQCB. In March 1996 the RWQCB rescinded the Cease and Desist Order based upon the City's Combined Sewer System (CSS) Improvement Plan. A major part of the CSS Improvement Plan consists of rehabilitation and improvement of Sump 2 facilities.

A preliminary design report completed in April 1996 by Brown and Caldwell recommended a general program to rehabilitate and improve Sump 2. Requests for Qualifications (RFQ) for Sump 2 design were sent to 24 consultant firms. Six consultant firms responded to the RFQ and submitted a Statement of Qualifications (SOQ). A selection committee short-listed three of the most qualified consultant firms based upon the SOQs, reviewed representative projects, conducted interviews, and selected Montgomery Watson Americas, Inc., to design the Sump 2 Rehabilitation and Improvement Project.

The Sump 2 Rehabilitation and Improvement Project includes the construction of a new pump station and rehabilitation of Sump 2. The total capacity of Sump 2 will be increased from 530 mgd to 740 mgd. Additionally, the project includes the installation of emergency standby diesel generators to keep the pumps operating during power outages. The current estimated construction cost of the project is \$42.5 million.

Based upon the size of the project and the extensive amount of design work required, the design services performed by Montgomery Watson Americas, Inc., was split into two phases. Phase 1- the Design Development phase, approved by Council on February 4, 1997, further defined the parameters for design and included preliminary design work. Phase 2- the Final Design phase - Supplemental Agreement No. 1, includes completion of plans and specifications and bidding support.

The total cost of the design phase is as follows:

Phase 1 - Design Development (original contract)	\$ 997,000
Phase 2 - Final Design (Part of Supplemental Agreement No. 1)	<u>\$2,432,000</u>
Total Estimated Sump 2 Design Cost	<u>\$3,429,000</u>

City Council
May 19, 1997
Supplemental Agreement No. 1 (PN: XM24)

ENVIRONMENTAL CONSIDERATIONS

Under direction by the City's Environmental Services Section, an environmental impact report (EIR) has been prepared for this project consistent with the California Environmental Quality Act. On March 11, 1997, Council certified the EIR, adopted the Findings of Fact and Statement of Overriding Considerations, and adopted the Mitigation Monitoring Plan.

FINANCIAL CONSIDERATIONS

The proposed contract amount with Montgomery Watson Americas, Inc., for Sump 2 Phase 2 - Final Design and Technical Services during construction is for a total amount not to exceed \$2,432,000. There are sufficient funds in the project (PN: XM24) to fund the Phase 2 Final Design.

POLICY CONSIDERATIONS

The Combined Sewer System Improvement Plan is consistent with past direction and satisfies requirements that resulted in the rescission of the Cease and Desist Order issued by the RWQCB.

MBE/WBE

Originally Montgomery Watson Americas, Inc. exceeded the MBE goal but did not meet the WBE goal. The additional scope of work results in a decrease in MBE participation for the total contract from 18.1% to 10.0% and an increase in WBE participation from 6.2% to 6.3%. Although individual City's MBE/WBE goals have not been met, Montgomery Watson Americas, Inc., demonstrated a good faith effort to meet the goals. Montgomery Watson Americas, Inc., identified tasks in the scope of work that could be subcontracted and contacted City certified MBE and WBE companies. Based upon these efforts, a total of seven (7) MBE/WBE subconsultants are being utilized.

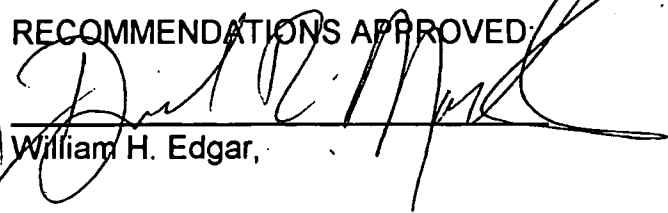
Currently, the Department of Utilities MBE/WBE participation is 9.48% and 6.75%.

Respectfully submitted,



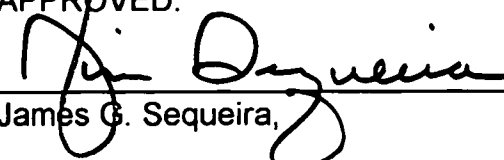
Gary A. Reents,
Engineering Services Manager

RECOMMENDATIONS APPROVED:



William H. Edgar,

APPROVED:



James G. Sequeira,

RESOLUTION NO. 97-322

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF _____

APPROVED
BY THE CITY COUNCIL
JUN 17 1997
OFFICE OF THE
CITY CLERK

AUTHORIZE THE CITY MANAGER AND CITY CLERK TO EXECUTE SUPPLEMENTAL AGREEMENT NO. 1 TO THE CONSULTANT SERVICES AGREEMENT WITH MONTGOMERY WATSON AMERICAS, INC., FOR PHASE 2 - FINAL DESIGN AND TECHNICAL SERVICES DURING CONSTRUCTION FOR AN AMOUNT NOT TO EXCEED \$2,432,000

BE IT RESOLVED BY THE SACRAMENTO CITY COUNCIL THAT:

The City Manager and City Clerk are authorized to execute Supplemental Agreement No. 1 to the consultant services agreement with Montgomery Watson Americas, Inc., for Phase 2 - Final Design for an amount not to exceed \$2,432,000.

MAYOR

ATTEST:

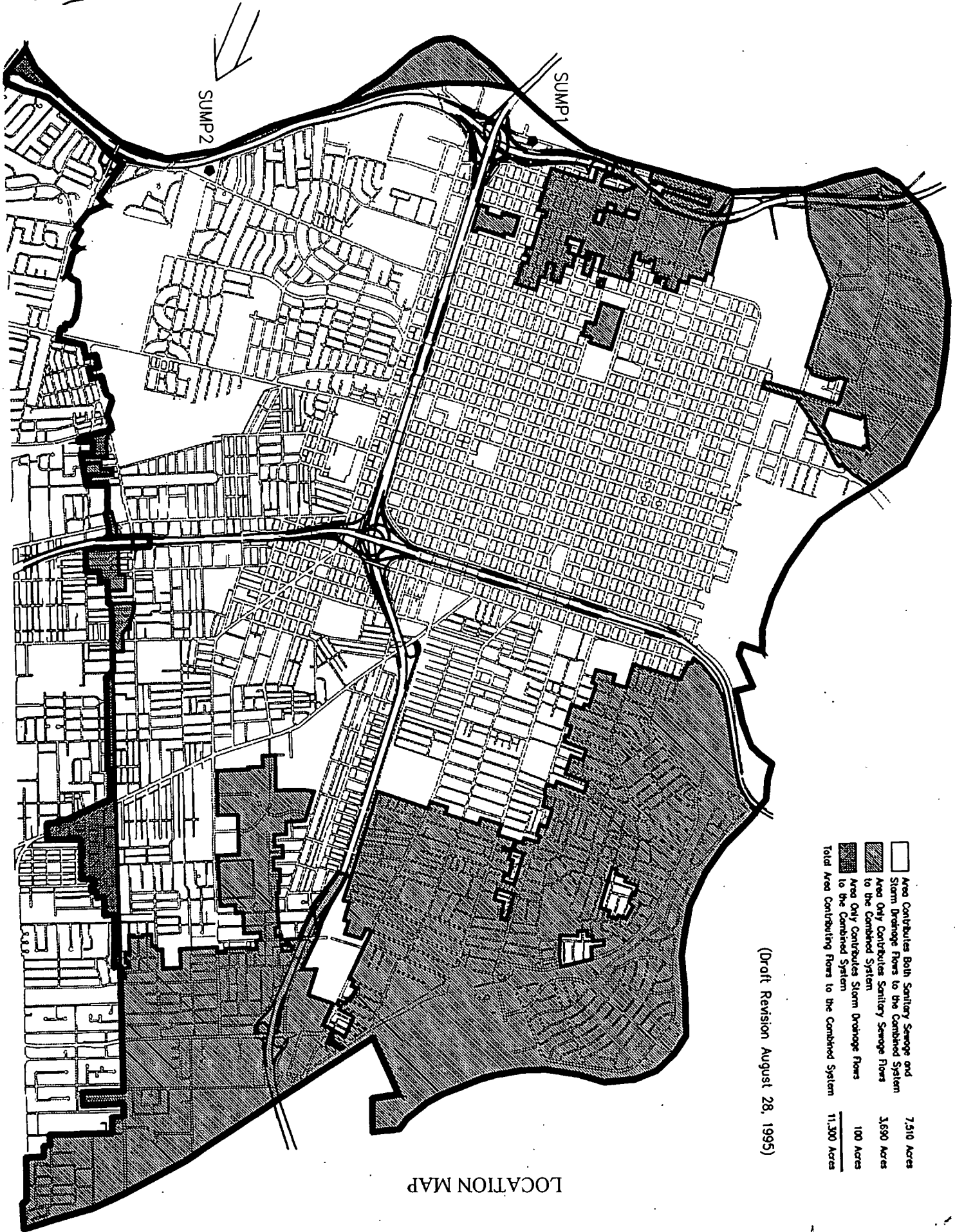
CITY CLERK

FOR CITY CLERK USE ONLY

RESOLUTION NO. _____

DATE ADOPTED: _____

1-5-



LOCATION MAP

□	Area Contributes Both Sanitary Sewage and Storm Drainage Flows to the Combined System	7,310 Acres
▨	Area Only Contributes Sanitary Sewage Flows to the Combined System	3,690 Acres
▩	Area Only Contributes Storm Drainage Flows to the Combined System	100 Acres
▧	Total Area Contributing Flows to the Combined System	11,100 Acres

(Draft Revision August 28, 1995)

SUPPLEMENTAL AGREEMENT
Engineering Services Division

Project Title and Job Number: SUMP 2 REHABILITATION AND IMPROVEMENT PROJECT (PN:XM24)

Date: 5/27/97

Purchase Order #: 7XM2494904

Supplemental Agreement No.: 1

The City of Sacramento ("City") and Montgomery Watson Americas, Inc. ("Consultant"), as parties to that certain Consultant and Professional Services Agreement designated as Agreement Number 97-012, including any and all prior supplemental agreements modifying said agreement (said agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplemental and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

Consultant shall perform all work for Phase 2 - Final Design and Engineering Technical Services During Construction, as set forth in Amendment No. 1 (22 pages) attached hereto and incorporated herein by this reference.

2. In consideration of the additional and/or revised services described in Section 1 above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Consultant's fees and expenses, is increased/decreased by \$3,738,000.00, and said maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	\$ <u>997,000.00</u>
Net change by previous supplemental agreements:	\$ <u>0</u>
Not-to-exceed amount prior to this supplemental agreement:	\$ <u>997,000.00</u>
increase/decrease by this supplemental agreement:	\$ <u>3,738,000.00</u>
New not-to-exceed amount including all supplemental agreements:	\$ <u>4,735,000.00</u>

3. Consultant agrees that the amount of increase or decrease in the not-to-exceed amount specified in Section 2 above, shall constitute full compensation for the additional and/or revised services specified in Section 1, above, and shall fully compensate Consultant for any and all direct and indirect costs that may be incurred by Consultant in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Consultant.
4. Consultant warrants and represents that the person or persons executing this supplemental agreement on behalf of Consultant has or have been duly authorized by Consultant to sign this supplemental agreement and bind Consultant to the terms thereof.
5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Consultant shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended by:

Approved as to Form By:

Project Manager

Joe [Signature]

City Attorney

Approved By:

Steven J. Hyland *Ann E. Farrell*
STEVEN J. HYLAND ANN E. FARRELL
Consultant Vice President
VICE PRESIDENT Vice President

Approved By:

Attested to By:

City of Sacramento

City Clerk

**AMENDMENT NO. 1
TO
CONSULTANT AND PROFESSIONAL SERVICES AGREEMENT
FOR
SUMP 2 IMPROVEMENTS PROJECT**

This Amendment No. 1 to the Consultant and Professional Engineering Services Agreement between the City of Sacramento (CITY) and Montgomery Watson Americas Inc. (MW) dated February 4, 1997 for the Sump 2 Improvements project (PROJECT) modifies the existing Agreement and provides for additional engineering services. References contained herein to the CITY shall also include authorized representatives designated by the CITY. The additional engineering services will be provided for the Final Design, Bidding Support, and Support Services During Construction phases of the subject project as described herein.

Changes to the Project Overview and Basis of Design. The Project Overview and Basis of Design described in Exhibit A - Scope of Services of the existing Agreement will be modified as follows:

Delete the second sentence of the first paragraph under Project Overview and replace with the following:

The project will increase the nominal design flow capacity of the Sump 2 facility from 530 mgd to 740 mgd and include mechanical screening and standby electrical power for the nominal design flow capacity.

Delete Item C6 under Basis of Design and replace with the following:

C6. Modification of existing Control Room to accommodate new computer cabinet, three control workstations, and remodeled men and women rest rooms.

Delete Item C7 under Basis of Design and replace with the following:

C7. Rehabilitation and upgrade of the existing Sump 2 Pump Station HVAC system.

Delete Item D3 under Basis of Design and replace with the following:

D3. Relocation of existing control functions for the existing High Lift Pumps from the Headhouse control room to the new Sump 2A Pump Station electrical room.

Delete Item D4 under Basis of Design and replace with the following:

D4. Revision of electrical feed service for the existing High Lift Pumps to provide electrical power from the new Sump 2A Pump Station electrical room.

Delete Item E8 under Basis of Design.

City of Sacramento
Sump 2 Rehabilitation and Improvement Project
Phase 2 Final Design
Exhibit A - Scope of Services

Final Design. Final Design will be based on the Design Development phase of the PROJECT and will consist of the production of specifications and drawings for one construction contract.

MW will be responsible to provide the following elements:

- G09 Construction Cost Estimate. Estimate construction cost in accordance with American Association of Cost Estimators guidelines at the 50 percent design phase with an estimated accuracy of +/- 25 percent, at the 90 percent design phase with an estimated accuracy of +/- 10 percent, and at the Final Design stage with an estimated accuracy of +/- 10 percent.
- G10 Geotechnical Coordination. Review technical specifications for coordination with the Geotechnical Report recommendations.
- C06 Supplemental Survey. Provide supplemental survey information as needed to field verify critical dimensions and elevations based on a maximum of three days of two-person survey party.
- CD01 Contract Documents. Prepare technical specifications and assist the bid evaluation for the prepurchase of the following major equipment:
 - Mechanical Trash Racks/Mechanical Bar Screens
 - Vertical Non-Clog Centrifugal Pumps With Electrical Motors
 - Engine-Generator Sets
 - Clean Power Variable Frequency Drives
 - Electrical Switchgear and Motor Control Centers

The City will be responsible for the preparation of all documents other than the technical specifications; assembly and printing of the prepurchase documents; and the advertisement and bidding of the prepurchase equipment.

Prepare contract specifications for the bidding and construction of the Sump 2 Rehabilitation and Improvement project including Division 00 - Bidding Requirements, Contract Forms, General Conditions, and Supplementary Conditions; Division 01 - General Requirements; and Divisions 02 through 17 - Technical Specifications. Prepare contract drawings for the bidding and construction of the Sump 2 Improvement project. The anticipated list of contract drawings are presented in Attachment 1 - List of Drawings for reference.

- Q04 Technical Review Sessions. Conduct technical review sessions with City and MW project team staff to review and discuss the 50 percent and 90 percent design phase submittals. The 50 percent review will incorporate a constructability and bidability review.
- Q05 Final Checking. Check the final contract specifications and drawings for potential errors and omissions and for coordination between the design disciplines. Incorporate final review comments provided by the City.
- P02 Public Relations Assistance. Provide assistance with Lucy Roberts Public Relations under the direction of the City to support the City's public relations program for the Sump 2 Improvement project in accordance with the scope of services presented in Attachment 1 of the Phase 1 Design Development Exhibit A - Scope of Services.

Bidding Support. After completion of the Final Design phase, the Bidding Support phase will commence. MW will be responsible to provide the following elements:

- B01 Assistance at Pre-Bid Meeting. Assist City conduct pre-bid meeting and tour of project site.
- B02 Responses to Questions. Assist City prepare responses to technical questions about the contract requirements from prospective bidders, subcontractors, and suppliers during the advertisement period.
- B03 Addenda Preparation. Assist City prepare and issue addenda to the contract specifications and drawings during the advertisement period to clarify and revise project requirements.
- B04 Bid Evaluation. Assist City review the qualifications of bidders and formality of bid documents for award to the lowest responsible, responsive bidder.
- B05 Conformed Specifications and Drawings. Prepare conformed specifications and drawings based on all addenda issued. Reproduce 50 copies of conformed specifications and half-sized drawings and 20 full-size sets of blue line drawings.

Support Services During Construction. Montgomery Watson (MW) will provide engineering support services during construction to assist the CITY with the construction management of the PROJECT. In providing the engineering support services described below, MW will serve in a support role to the CITY during construction. The construction firm selected by the CITY to perform the project construction (CONTRACTOR) will have sole responsibility for planning, directing, scheduling, providing, and managing the manpower, equipment, and material necessary for construction.

CITY acknowledges that during construction unforeseen field conditions or errors or omissions will normally occur and result in change orders issued to the CONTRACTOR. The CITY also acknowledges that on a project as large and complex as the Sump 2 Improvements, it would not be unusual for such change orders to total five percent of the construction cost.

Engineering support services during construction will be provided to assist the CITY with technical services, office engineering services, and O&M manual. MW will be responsible to provide the following elements:

Technical Services

MW will provide at the job-site, upon the request of the CITY, general and specific support as described below to assist the CITY inspect the CONTRACTOR's work to ensure compliance with the Contract Documents and design intent.

- TS01 Preconstruction Conference. Attend the preconstruction conference that will address all project administration and reporting procedures, team roles and responsibilities, and other procedures.

City of Sacramento
Sump 2 Rehabilitation and Improvement Project
Phase 2 Final Design
Exhibit A - Scope of Services

- TS02 Weekly Progress Meetings. Attend weekly on-site progress meetings that will address construction progress, problem areas, and proposed resolutions. A MW representative of the design team will attend these meetings to facilitate overall communications, provide information, and assist prompt resolution of potential problems.
- TS03 Technical Meetings. Assist City conduct special technical meetings to address and resolve technical construction issues.
- TS04 Project Close-out. Assist the City implement the project close-out procedures required by the Contract Documents. Assist CITY confirm the satisfactory completion of all contract and change order work and perform a final project walk through to assist preparation of the final punchlist.

Office Engineering Services

The following engineering services will be provided by the design team during construction:

- OE01 Submittal Review. Review shop drawings of materials and equipment submitted by the CONTRACTOR for conformance with the Contract Documents.
- OE02 RFIs. Assist the CITY respond to Requests for Information (RFIs) pertaining to the Contract Specifications and Drawings. Prepare elementary sketches, if required, to clarify the design.
- OE03 Substitutions. Assist the CITY evaluate material and equipment substitutions that may be proposed during construction.
- OE04 Change Orders. Assist the CITY review potential change orders and prepare any related revisions of the Contract Specifications and Drawings.
- OE05 Site Visits. Provide periodic site visits by members of the design team to assist the inspection of civil, structural, architectural, mechanical, HVAC, electrical, and instrumentation and control work for conformance with the Contract Specifications and Drawings.
- OE06 Factory Site Visits. Assist the CITY with factory inspections. MW has a nationwide staff that is available to provide cost-effective off-site inspections.
- OE07 Geotechnical Services. MW will subcontract with the design geotechnical engineer to serve as a resource for the CITY to address issues relating to dewatering, shoring, excavation, backfill and compaction, settlement, liquifiable soils, pipe and structure foundation adequacy, and other geotechnical concerns. The design geotechnical engineer will prepare brief written site visit reports to document their findings and recommendations and provide them to the CITY and MW.
- OE08 Programming. Assist the CITY in programming the PLCs and SCADA system computer terminals. MW will provide a level of assistance which is anticipated to be approximately 50 percent of the effort needed to program, troubleshoot, and startup the PLCs and SCADA system.

OE09 Record Drawings. Assist the CITY reconcile the CITY's markups of contract drawings with those prepared by the CONTRACTOR's at the end of the project. MW will then revise the original CAD drawing files to reflect the changes that have occurred during construction. One set of reproducible and three sets of blue line prints of the final record drawings will be delivered to the CITY.

O&M Services

OM01 Operations Manual Outline. Prepare and submit a comprehensive outline and list of figures for the proposed Operations Manual to the CITY prior to 50 percent completion of construction. The Operations Manual content will incorporate applicable sections of the existing operations manual for the Sump 2 Pump Station. After CITY review, MW will meet with the designated CITY representative to incorporate CITY comments.

OM02 Operations Manual Preparation. Based on the approved outline, prepare an Operations Manual that includes the following items:

- Overview description
- Process and major equipment descriptions
- Summary of data and operating criteria for equipment
- Electrical controls, instrumentation, and PLC control logic
- Startup procedures
- Routine operational procedures
- Shutdown procedures
- Alarm response and emergency procedures
- Equipment maintenance identification numbers
- Schematic piping diagrams and process flow diagrams to support text.

As draft chapters are completed, MW will forward two copies to the CITY for their review. In conjunction with CITY review, MW will perform an in-house review of the initial draft chapters to assure quality control and adherence to the design intent.

After CITY review and approval and prior to 95 percent completion of construction (30 days prior to startup), MW will deliver the Operations Manual in 3-ring, vinyl covered binders with printed covers, topic index, and printed divider tabs. The Operations Manual will consist of approximately 100 to 120 pages of text and 9 to 11 figures.

OM03 Operations Manual Revisions. Revise the Operations Manual approximately six months after startup to reflect as-built conditions and operation based on CITY input. Deliver the revised pages and figures to the CITY within 30 days following CITY input.

OM04 Technical Manuals. Develop a format for maintenance data summary sheets in consultation with the CITY. Review Contractor-furnished or vendor-furnished O&M submittals, including the equipment O&M manuals and maintenance data summary sheets. Ensure that submittals include necessary and pertinent information and that submittals are complete and acceptable for use by the CITY. Compile and deliver the approved manuals to the CITY.

OM05 Start-up Assistance. MW will provide technical assistance during equipment testing and facility startup to aid the transition from the construction phase to the operations phase.

OM06 Start-up Training. MW will develop an operator training program based on the draft Operations Manual. MW will submit an outline of the proposed operator training program for CITY review and comment. MW will provide classroom presentation, field orientation, and question and answer sessions. Training will be tailored to cover the system relationships that are not typically covered by the equipment manufacturers.

Services Provided by the CITY

The following services and responsibilities will be provided by the CITY:

1. Legal Services. Legal services related to contract review, bidding irregularities, protests, claims, and related items.
2. Project Administration. Responsibility and authority to approve any changes to the specifications, plans, or other contractual obligations of the CITY.
3. Financial Administration. Books of account for the receipts and disbursements associated with the project necessary for fiscal control. The CITY will coordinate progress payment and change order costs to facilitate proper financial administration.
4. Permits. All permit applications, fees, agency approvals, and coordination thereof.
5. Field Office Trailer. One fully equipped field office trailer for the use of the CITY's and MW's staff.
6. Materials Testing. Supplemental soils compaction, concrete strength, and other materials testing, as necessary, to ensure the work's contract compliance. Complete logs of all compaction testing results will be maintained to ensure that all failing tests are covered by a passing retest, as well as documentation for future reference.
7. Verification Surveying. Surveying services to verify CONTRACTOR's general layout of structures and to verify elevations on various structures as necessary to confirm compliance with the Drawings.
8. Field Files. Project files at the job site.
9. Change Orders. Change order process to defend against unwarranted change orders and to obtain a fair and reasonable price for those items determined to be valid extra-work items.
10. Claims Management. Tracking and management all extra work items and resolution of all potential claims with the assistance of MW when requested.

Optional Services

Upon the CITY's written request, MW will provide the CITY optional services should they be needed during project construction. The additional scope and associated costs will be negotiated with the CITY at the time that the optional services are requested. Optional services include, but not limited to, the following:

- Hazardous waste characterization, remediation, and cleanup/disposal services
- Updating the Combined Sewer System operations manual
- O&M support services
- Supplemental claims mitigation support
- Supplemental surveying services
- Additional field services.

Deliverables

MW will be responsible to provide the deliverables indicated in the table below.

Description	No.	Schedule
<u>Phase 2 Final Design</u>		
• Prepurchase Technical Specifications	1	Sept. 30, 1997
• 50 Percent Construction Cost Estimate	10	Sept. 12, 1997
• Final Construction Cost Estimate	10	Jan. 02, 1998
• 50 Percent Submittal	25	Aug. 29, 1997
• 90 Percent Submittal	25	Nov. 24, 1997
• Construction Contract Documents	200	Jan. 02, 1998
<u>Bidding Support</u>		
• Addenda	200	As needed
<u>Support Services During Construction</u>		
• Record Drawings	40	Nov. 30, 2000
• O&M Manual Outline	10	Jan. 08, 1999
• Draft O&M Manual	10	Sept. 03, 1999
• Final O&M Manual	10	Sept. 29, 2000
• Technical Manual	10	Sept. 03, 1999

Fee Schedule

The total of all fees and expenses to be paid to CONSULTANT for the additional engineering services described in this amendment shall not exceed \$2,432,000 for Final Design/Bidding Support and shall not exceed \$1,306,000 for Support Services During Construction (refer to Attachment 2 - Final Design/Bidding Support /Support Services During Construction Budget) without prior written approval of the City.

The estimated budget for Support Services During Construction is based on the following assumptions:

1. The duration for substantial completion of Phase A construction is approximately 75 weeks and the overall duration for completion of Phase A and Phase B construction is approximately 136 weeks.
2. MW will attend 100 weekly progress meetings.
3. MW will attend 25 technical meetings.
4. MW will review up to 330 submittals and resubmittals.
5. MW will review up to 225 RFIs.
6. MW will review up to 20 substitutions.
7. MW will review and prepare up to 130 change orders.
8. MW will conduct up to 80 site visits.
9. MW will conduct up to 5 factory site visits.
10. MW will provide up to 750 hours of PLC and SCADA system programming assistance.
11. MW will provide 10 draft Operations Manuals, 10 final Operations Manuals, and 10 Technical Manuals.
12. MW will provide up to 120 hours of startup assistance and up to 80 hours of startup training.

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

Attachment 1 - List of Drawings			
Dwg. No.	Title	Responsible Arch/Engr	Comments
General			
G-01	Cover Sheet	MW	
G-02	Vicinity Map/Location Map	MW	
G-03	List of Drawings - I	MW	
G-04	List of Drawings - II	MW	
G-05	Abbreviations	MW	
G-06	Symbols	MW	
G-07	Process Flow Schematic/Design Criteria	MW	
G-08	Hydraulic Profile	MW	
G-09	Sequence of Construction	MW	
G-10	Piping Schedule	MW	
Civil			
Site			
50C-01	Site Plan	MW	1"=20'
50C-02	Horizontal Control/Soil Boring Locations	MW	1"=20'
50C-03	Demolition Plan	MW	1"=20'
50C-04	Soil Stabilization Plan	MW	1"=20'
50C-05	Grading and Drainage Plan	MW	1"=20'
50C-06	Paving Plan	MW	1"=20'
50C-07	Utility Piping Plan	MW	1"=20'
50C-08	Major Yard Piping Plan	MW	1"=20'
50C-09	Santa Buena Way Corridor	MW	1"=20'
50C-10	Yard Piping Profiles - I	MW	1"=20'
50C-11	Yard Piping Profiles - II	MW	1"=20'
50C-12	Yard Piping Profiles - III	MW	1"=20'
50C-13	Yard Piping Details	MW	
50C-14	Regional Valve Vault	MW	
50C-15	CWTP Valve Vault	MW	
Combined Sewer System			
59C-01	CSS Monitoring Station Plan - I	MW	
59C-02	CSS Monitoring Station Plan - II	MW	
59C-03	CSS Monitoring Station Plan - III	MW	
59C-04	CSS Monitoring Station Plan - IV	MW	
59C-05	CSS Monitoring Station Plan - V	MW	
General			
GC-01	Civil Standard Details - I	MW	
GC-02	Civil Standard Details - II	MW	
GC-03	Civil Standard Details - III	MW	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

	Landscaping		
	<u>Site</u>		
50L-01	Planting Plan	Koski Sullivan	1"=20'
50L-02	Irrigation Plan	Koski Sullivan	1"=20'
	<u>General</u>		
GL-01	Landscaping Standard Details - I	Koski Sullivan	
	Cathodic Protection		
	<u>Site</u>		
50CP-01	Cathodic Protection Plan	V&A	1"=20'
	<u>General</u>		
GCP-01	Cathodic Protection Standard Details - I	V&A	
GCP-02	Cathodic Protection Standard Details - II	V&A	
	Demolition		
	<u>Site</u>		
50D-01	Grit Basin/Aeration Basin Plan	MW	
50D-02	Grit Basin/Aeration Basin Section	MW	
50D-03	Clarifier/Contact Basin Plan	MW	
50D-04	Clarifier/Contact Basin Section	MW	
50D-05	Filter Plan	MW	
50D-06	Filter Section	MW	
50D-07	Backwash Pump Plan & Section	MW	
50D-08	Exist. Sump 2 Wet Well No. 1-3 Entrance	MW	
	Structural		
	<u>Site</u>		
50S-01	Foul Air Scrubber Plan	MW	
50S-02	Foul Air Scrubber Sections	MW	
50S-03	Land Park/Donner Trunk Sewer Plan	MW	
50S-04	Land Park/Donner Trunk Sewer Sections	MW	
50S-05	Regional Valve Vault Plan & Sections	MW	
50S-06	CWTP Valve Vault Plan & Sections	MW	
	<u>Existing Sump 2 Pump Station</u>		
51S-01	Stage 1 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51S-02	Stage 2 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51S-03	Stage 1 Deck Plan - Demolition	MW	1/4"=1'-0"
51S-04	Stage 2 Deck Plan - Demolition	MW	1/4"=1'-0"
51S-05	Stage 1 First Floor Plan - Demolition	MW	1/4"=1'-0"
51S-06	Stage 2 First Floor Plan - Demolition	MW	1/4"=1'-0"
51S-07	Stage 1 Roof Plan - Demolition	MW	1/4"=1'-0"
51S-08	Stage 2 Roof Plan - Demolition	MW	1/4"=1'-0"
51S-09	Stage 1 Lower Floor Plan	MW	1/4"=1'-0"
51S-10	Stage 2 Lower Floor Plan	MW	1/4"=1'-0"

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

51S-11	Stage 1 Deck Plan	MW	1/4"=1'-0"
51S-12	Stage 2 Deck Plan	MW	1/4"=1'-0"
51S-13	Stage 1 First Floor Plan	MW	1/4"=1'-0"
51S-14	Stage 2 First Floor Plan	MW	1/4"=1'-0"
51S-15	Stage 1 Roof Plan	MW	1/4"=1'-0"
51S-16	Stage 2 Roof Plan	MW	1/4"=1'-0"
51S-17	Cross Section A	MW	
51S-18	Cross Section B	MW	
51S-19	Longitudinal Section C	MW	
51S-20	Longitudinal Section D	MW	
51S-21	Sections I	MW	
51S-22	Sections II	MW	
51S-23	Sections III	MW	
51S-24	Details I	MW	
51S-25	Details II	MW	
51S-26	Details III	MW	
	<u>Flow Control Structure</u>		
	(None)		
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
54S-01	Plan	MW	
54S-02	Sections	MW	
	<u>New Sump 2A Pump Station</u>		
56S-01	South Foundation Plan	B&P	1/4"=1'-0"
56S-02	North Foundation Plan	B&P	1/4"=1'-0"
56S-03	South Lower Floor Plan	B&P	1/4"=1'-0"
56S-04	North Lower Floor Plan	B&P	1/4"=1'-0"
56S-05	South Deck Plan	B&P	1/4"=1'-0"
56S-06	North Deck Plan	B&P	1/4"=1'-0"
56S-07	South First Floor Plan	B&P	1/4"=1'-0"
56S-08	North First Floor Plan	B&P	1/4"=1'-0"
56S-09	South Roof Plan	B&P	1/4"=1'-0"
56S-10	North Roof Plan	B&P	1/4"=1'-0"
56S-11	Cross Section A	B&P	
56S-12	Cross Section B	B&P	
56S-13	Longitudinal Section C	B&P	
56S-14	Longitudinal Section D	B&P	
56S-15	Sections I	B&P	
56S-16	Sections II	B&P	
56S-17	Sections III	B&P	
56S-18	Details I	B&P	
56S-19	Details II	B&P	
56S-20	Details III	B&P	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

<u>Standby Power Building</u>				
57S-01	Switchgear Room Foundation Plan	B&P		1/4"=1'-0"
57S-02	Engine-Generator Room Foundation Plan	B&P		1/4"=1'-0"
57S-03	Switchgear Room First Floor Plan	B&P		1/4"=1'-0"
57S-04	Engine-Generator Room First Floor Plan	B&P		1/4"=1'-0"
57S-05	Switchgear Room Roof Plan	B&P		1/4"=1'-0"
57S-06	Engine-Generator Room Roof Plan	B&P		1/4"=1'-0"
57S-07	Cross Section A	B&P		
57S-08	Cross Section B	B&P		
57S-09	Longitudinal Section C	B&P		
57S-10	Sections I	B&P		
57S-11	Sections II	B&P		
57S-12	Sections III	B&P		
57S-13	Details I	B&P		
57S-14	Details II	B&P		
57S-15	Details III	B&P		
<u>General</u>				
GS-01	Structural Standard Details I	MW		
GS-02	Structural Standard Details II	MW		
GS-03	Structural Standard Details III	MW		
GS-04	Structural Standard Details IV	MW		
GS-05	Structural Standard Details V	MW		
GS-06	Structural Standard Details VI	MW		
<u>Architectural</u>				
<u>Existing Sump 2 Pump Station</u>				
51A-01	Stage 1 First Floor Plan	Easton		1/4"=1'-0"
51A-02	Stage 2 First Floor Plan	Easton		1/4"=1'-0"
51A-03	Control Room Floor Plan	Easton		1/4"=1'-0"
51A-04	Control Room Reflected Ceiling Plan	Easton		1/4"=1'-0"
51A-05	Control Room Interior Elevations - I	Easton		
51A-06	Sections - I	Easton		
51A-07	Details - I	Easton		
<u>Flow Control Structure</u>				
	(None)			
<u>Riverside Headhouse</u>				
	(None)			
<u>Utility Water Pump Station</u>				
	(None)			
<u>New Sump 2A Pump Station</u>				
56A-01	South First Floor Plan	Easton		1/4"=1'-0"
56A-02	North First Floor Plan	Easton		1/4"=1'-0"
56A-03	South Roof Plan	Easton		1/4"=1'-0"
56A-04	North Roof Plan	Easton		1/4"=1'-0"
56A-05	East & South Exterior Elevations	Easton		

City of Sacramento Combined Sewer System
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 Phase 2 Final Design
 Exhibit A - Scope of Services

56A-06	West & North Exterior Elevations	Easton	
56A-07	Sections - I	Easton	
56A-08	Sections - II	Easton	
56A-09	Details - I	Easton	
	<u>Standby Power Building</u>		
57A-01	Switchgear Room First Floor Plan	Easton	1/4"=1'-0"
57A-02	Engine-Generator Room First Floor Plan	Easton	1/4"=1'-0"
57A-03	Switchgear Room Roof Plan	Easton	1/4"=1'-0"
57A-04	Engine-Generator Room Roof Plan	Easton	1/4"=1'-0"
57A-05	East & South Exterior Elevations	Easton	
57A-06	West & North Exterior Elevations	Easton	
57A-07	Sections - I	Easton	
57A-08	Sections - II	Easton	
57A-09	Details - I	Easton	
	<u>General</u>		
GA-01	Architectural Symbols	Easton	
GA-02	Door/Window Schedules	Easton	
GA-03	Room Finish Schedules	Easton	
GA-04	Architectural Standard Details - I	Easton	
GA-05	Architectural Standard Details - II	Easton	
GA-06	Architectural Standard Details - III	Easton	
GA-07	Architectural Standard Details - IV	Easton	
	<u>Mechanical</u>		
	<u>Site</u>		
50M-01	Foul Air Scrubber Plan	MW	
50M-02	Foul Air Scrubber Sections	MW	
	<u>Existing Sump 2 Pump Station</u>		
51M-01	Stage 1 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51M-02	Stage 2 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51M-03	Stage 1 Deck Plan - Demolition	MW	1/4"=1'-0"
51M-04	Stage 2 Deck Plan - Demolition	MW	1/4"=1'-0"
51M-05	Stage 1 First Floor Plan - Demolition	MW	1/4"=1'-0"
51M-06	Stage 2 First Floor Plan - Demolition	MW	1/4"=1'-0"
51M-07	Stage 1 Lower Floor Plan	MW	1/4"=1'-0"
51M-08	Stage 2 Lower Floor Plan	MW	1/4"=1'-0"
51M-09	Stage 1 Deck Plan	MW	1/4"=1'-0"
51M-10	Stage 2 Deck Plan	MW	1/4"=1'-0"
51M-11	Stage 1 First Floor Plan	MW	1/4"=1'-0"
51M-12	Stage 2 First Floor Plan	MW	1/4"=1'-0"
51M-13	Cross Section A	MW	
51M-14	Cross Section B	MW	
51M-15	Longitudinal Section C	MW	
51M-16	Longitudinal Section D	MW	
51M-17	Sections I	MW	
51M-18	Sections II	MW	
51M-19	Details I	MW	

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 Sump 2 Rehabilitation and Improvement Project
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 Exhibit A - Scope of Services

51M-20	Details II	MW	
	<u>Flow Control Structure</u>		
52M-01	Check Valve Plan & Section	MW	
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
54-M-01	Plan	MW	
54-M-02	Sections & Details	MW	
	<u>New Sump 2A Pump Station</u>		
56M-01	South Lower Floor Plan	GSD	1/4"=1'-0"
56M-02	North Lower Floor Plan	GSD	1/4"=1'-0"
56M-03	South Deck Plan	GSD	1/4"=1'-0"
56M-04	North Deck Plan	GSD	1/4"=1'-0"
56M-05	South First Floor Plan	GSD	1/4"=1'-0"
56M-06	North First Floor Plan	GSD	1/4"=1'-0"
56M-07	South Utility Plan	GSD	1/4"=1'-0"
56M-08	North Utility Plan	GSD	1/4"=1'-0"
56M-09	Cross Section A	GSD	
56M-10	Cross Section B	GSD	
56M-11	Longitudinal Section C	GSD	
56M-12	Longitudinal Section D	GSD	
56M-13	Sections I	GSD	
56M-14	Sections II	GSD	
56M-15	Details I	GSD	
56M-16	Details II	GSD	
	<u>Standby Power Building</u>		
57M-01	Switchgear Room First Floor Plan	MW	1/4"=1'-0"
57M-02	Engine-Generator Room First Floor Plan	MW	1/4"=1'-0"
57M-03	Cross Section A	MW	
57M-04	Cross Section B	MW	
57M-05	Longitudinal Section C	MW	
57M-06	Sections I	MW	
57M-07	Sections II	MW	
57M-08	Details I	MW	
57M-09	Details II	MW	
	<u>General</u>		
GM-01	Pump/Equipment/Gate/Valve Schedules	MW	
GM-02	Mechanical Standard Details I	MW	
GM-03	Mechanical Standard Details II	MW	
GM-04	Mechanical Standard Details III	MW	
GM-05	Mechanical Standard Details IV	MW	
GM-06	Mechanical Standard Details V	MW	

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 Sump 2 Rehabilitation and Improvement Project
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 Exhibit A - Scope of Services

<u>HVAC</u>				
<u>Existing Sump 2 Pump Station</u>				
51H-01	Stage 1 Lower Floor Plan - Demolition	Taylor		1/4"=1'-0"
51H-02	Stage 1 Deck Plan - Demolition	Taylor		1/4"=1'-0"
51H-03	Stage 1 First Floor Plan - Demolition	Taylor		1/4"=1'-0"
51H-04	Stage 1 Roof Plan - Demolition	Taylor		1/4"=1'-0"
51H-05	Stage 1 First Floor Plan	Taylor		1/4"=1'-0"
51H-06	Stage 2 First Floor Plan	Taylor		1/4"=1'-0"
51H-07	Cross Section A	Taylor		
51H-08	Cross Section B	Taylor		
51H-09	Longitudinal Section C	Taylor		
51H-10	Sections I	Taylor		
51H-11	Details I	Taylor		
<u>Flow Control Structure</u>				
52H-01	Foul Air Connection	Taylor		
<u>Riverside Headhouse</u>				
(None)				
<u>Utility Water Pump Station</u>				
(None)				
<u>New Sump 2A Pump Station</u>				
56H-01	South Lower Floor Plan	Taylor		1/4"=1'-0"
56H-02	North Lower Floor Plan	Taylor		1/4"=1'-0"
56H-03	South Deck Plan	Taylor		1/4"=1'-0"
56H-04	North Deck Plan	Taylor		1/4"=1'-0"
56H-05	South First Floor Plan	Taylor		1/4"=1'-0"
56H-06	North First Floor Plan	Taylor		1/4"=1'-0"
56H-07	South Roof Plan	Taylor		1/4"=1'-0"
56H-08	North Roof Plan	Taylor		1/4"=1'-0"
56H-09	Cross Section A	Taylor		
56H-10	Cross Section B	Taylor		
56H-11	Longitudinal Section C	Taylor		
56H-12	Longitudinal Section D	Taylor		
56H-13	Sections I	Taylor		
56H-14	Details I	Taylor		
<u>Standby Power Building</u>				
57H-01	Switchgear Room First Floor Plan	Taylor		1/4"=1'-0"
57H-02	Engine-Generator Room First Floor Plan	Taylor		1/4"=1'-0"
57H-03	Switchgear Room Roof Plan	Taylor		1/4"=1'-0"
57H-04	Engine-Generator Room Roof Plan	Taylor		1/4"=1'-0"
57H-05	Cross Section A	Taylor		
57H-06	Cross Section B	Taylor		
57H-07	Longitudinal Section C	Taylor		
57H-08	Sections I	Taylor		
57H-09	Details I	Taylor		

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

	<u>General</u>		
GH-01	Existing Sump 2 PS HVAC Schematic	Taylor	
GH-02	New Sump 2A PS HVAC Schematic		
GH-03	Standby Power Building HVAC Schematic	Taylor	
GH-04	Foul Air HVAC Schematic	Taylor	
GH-05	HVAC Schedules - I	Taylor	
GH-06	HVAC Schedules - II	Taylor	
GH-07	HVAC Standard Details I	Taylor	
GH-08	HVAC Standard Details II	Taylor	
GH-09	HVAC Standard Details III	Taylor	
GH-10	HVAC Standard Details IV	Taylor	
	<u>Electrical</u>		
	<u>Site</u>		
50E-01	Foul Air Scrubber Plan	MW	
50E-02	High Lift Pump Station Plan	MW	
	<u>Existing Sump 2 Pump Station</u>		
51E-01	Stage 1 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51E-02	Stage 2 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51E-03	Stage 1 First Floor Plan - Demolition	MW	1/4"=1'-0"
51E-04	Stage 2 First Floor Plan - Demolition	MW	1/4"=1'-0"
51E-05	Control Room - Demolition	MW	
51E-06	Stage 1 Lower Floor Plan - Equipment	MW	1/4"=1'-0"
51E-07	Stage 2 Lower Floor Plan - Equipment	MW	1/4"=1'-0"
51E-08	Stage 1 First Floor Plan - Equipment	MW	1/4"=1'-0"
51E-09	Stage 2 First Floor Plan - Equipment	MW	1/4"=1'-0"
51E-10	Control Room - Equipment	MW	
51E-11	Stage 1 Lower Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-12	Stage 2 Lower Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-13	Stage 1 First Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-14	Stage 2 First Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-15	Control Room - Ltg & Grdg	MW	
51E-16	Cross Section A	MW	
51E-17	Cross Section B	MW	
51E-18	Longitudinal Section C	MW	
	<u>Flow Control Structure</u>		
	(None)		
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
54E-01	Plan	MW	
	<u>New Sump 2A Pump Station</u>		
56E-01	South Lower Floor Plan - Equipment	MW	1/4"=1'-0"
56E-02	North Lower Floor Plan - Equipment	MW	1/4"=1'-0"
56E-03	South Deck Plan - Equipment	MW	1/4"=1'-0"

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

56E-04	North Deck Plan - Equipment	MW	1/4"=1'-0"
56E-05	South First Floor Plan - Equipment	MW	1/4"=1'-0"
56E-06	North First Floor Plan - Equipment	MW	1/4"=1'-0"
56E-07	South Roof Plan - Equipment	MW	1/4"=1'-0"
56E-08	North Roof Plan - Equipment	MW	1/4"=1'-0"
56E-09	South Lower Floor Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-10	North Lower Floor Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-11	South Deck Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-12	North Deck Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-13	South First Floor Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-14	North First Floor Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-15	South Roof Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-16	North Roof Plan - Ltg &Grdg	MW	1/4"=1'-0"
56E-17	Cross Section A	MW	
56E-18	Cross Section B	MW	
56E-19	Longitudinal Section C	MW	
56E-20	Longitudinal Section D	MW	
	<u>Standby Power Building</u>		
57E-01	Switchgear Room First Floor - Equip	MW	1/4"=1'-0"
57E-02	Engine-Generator Room First Floor - Equip	MW	1/4"=1'-0"
57E-03	Switchgear Room Roof - Equip	MW	1/4"=1'-0"
57E-04	Engine-Generator Room Roof - Equip	MW	1/4"=1'-0"
57E-05	Switchgear Room First Floor - Ltg	MW	1/4"=1'-0"
57E-06	Engine-Generator Room First Floor - Ltg	MW	1/4"=1'-0"
57E-07	Cross Section A	MW	
57E-08	Cross Section B	MW	
57E-09	Longitudinal Section C	MW	
	<u>Combined Sewer System</u>		
59E-01	CSS Monitoring Station Plan - I	MW	
59E-02	CSS Monitoring Station Plan - II	MW	
59E-03	CSS Monitoring Station Plan - III	MW	
59E-04	CSS Monitoring Station Plan - IV	MW	
59E-05	CSS Monitoring Station Plan - V	MW	
	<u>General</u>		
GE-01	Electrical Symbols	MW	
GE-02	Electrical Abbreviations	MW	
GE-03	Electrical Key Site Plan	MW	1"=20'
GE-04	Electrical Site Plan - Power	MW	1"=20'
GE-05	Electrical Site Plan - Lighting	MW	1"=20'
GE-06	Main Distribution Single Line Diagram	MW	
GE-07	2400 V Substation Single Line Diagram	MW	
GE-08	480 V Substation Single Line Diagram	MW	
GE-09	Generator Switchgear Single Line Diagram	MW	
GE-10	Exist. Distrib. Single Line Diagram - I	MW	
GE-11	Exist. Distrib. Single Line Diagram - II	MW	
GE-12	Riverside Distrib. Single Line Diagram	MW	
GE-13	Substation/VFD Single Line Diagram - I	MW	
GE-14	Substation/VFD Single Line Diagram - II	MW	

City of Sacramento Combined Sewer System
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 Phase 2 Final Design
 Exhibit A - Scope of Services

GE-15	MCC Single Line Diagram - I	MW	
GE-16	MCC Single Line Diagram - II	MW	
GE-17	MCC Single Line Diagram - III	MW	
GE-18	Panelboard Single Line Diagram	MW	
GE-19	Main Switchgear Elevation	MW	
GE-20	Generator Switchgear Elevation	MW	
GE-21	Substation Elevation	MW	
GE-22	VFD Elevations	MW	
GE-23	MCC Elevations	MW	
GE-24	Riverside MCC Elevation	MW	
GE-25	Monitoring & Control System (IMPAC)	MW	
GE-26	Communications System Block Diagram	MW	
GE-27	Security System Block Diagram	MW	
GE-28	Fire System Block diagram	MW	
GE-29	Control Schematics - I	MW	
GE-30	Control Schematics - II	MW	
GE-31	Control Schematics - III	MW	
GE-32	Control Schematics - IV	MW	
GE-33	Control Schematics - V	MW	
GE-34	Control Schematics - VI	MW	
GE-35	Panelboard Schedules - I	MW	
GE-36	Panelboard Schedules - II	MW	
GE-37	Lighting Fixture Schedule	MW	
GE-38	Ductbank/Manhole Schedule	MW	
GE-39	Conduit Development Diagram - 1	MW	
GE-40	Conduit Development Diagram - 2	MW	
GE-41	Conduit Development Diagram - 3	MW	
GE-42	Conduit Development Diagram - 4	MW	
GE-43	Conduit Development Diagram - 5	MW	
GE-44	Conduit Development Diagram - 6	MW	
GE-45	Conduit Development Diagram - 7	MW	
GE-46	Conduit Development Diagram - 8	MW	
GE-47	Conduit Development Diagram - 9	MW	
GE-48	Conduit Development Diagram - 10	MW	
GE-49	Sample Electrical Interconnection Diagram	MW	
GE-50	Electrical Standard Details I	MW	
GE-51	Electrical Standard Details II	MW	
GE-52	Electrical Standard Details III	MW	
GE-53	Electrical Standard Details IV	MW	
GE-54	Electrical Standard Details V	MW	
	Instrumentation		
501-01	Foul Air P&ID	MW	
	<u>Existing Sump 2 Pump Station</u>		
511-01	Existing Pumps 1-4 P&ID	MW	
511-02	Existing Pumps 5-8 P&ID	MW	
511-03	Existing Pumps 9-11 P&ID	MW	
511-04	Vacuum Priming System P&ID	MW	
511-05	Utility Water System P&ID	MW	

City of Sacramento Combined Sewer System
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 Phase 2 Final Design
 Exhibit A - Scope of Services

51I-06	Instrument Air System P&ID	MW	
51I-07	Drainage Pumps P&ID	MW	
51I-08	Existing Panel Modifications/Demolition	MW	
51I-09	Existing Interface Loop Diagrams - I	MW	
51I-10	Existing Interface Loop Diagrams - II	MW	
51I-11	Existing Interface Loop Diagrams - III	MW	
51I-12	Existing Interface Loop Diagrams - IV	MW	
51I-13	Existing Interface Loop Diagrams - V	MW	
	<u>Flow Control Structure</u>		
	(None)		
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
54I-01	Utility Water Pump Station P&ID	MW	
	<u>New Sump 2A Pump Station</u>		
56I-01	Dry Weather Trash Racks P&ID	MW	
56I-02	Wet Weather Bar Screens P&ID	MW	
56I-03	Regional Pumps P&ID	MW	
56I-04	CWTP Pumps P&ID	MW	
56I-05	Drainage Pumps P&ID	MW	
56I-06	Support Systems P&ID	MW	
	<u>Standby Power Building</u>		
57I-01	Engine-Generator P&ID	MW	
57I-02	Diesel Fuel System P&ID	MW	
	<u>Combined Sewer System</u>		
59I-01	CSS Monitoring Stations - I P&ID	MW	
59I-02	CSS Monitoring Stations - II P&ID	MW	
59I-03	CSS Monitoring Stations - III P&ID	MW	
59I-04	CSS Monitoring Stations - IV P&ID	MW	
59I-05	CSS Monitoring Stations - V P&ID	MW	
	<u>General</u>		
GI-01	Instrument Symbols & Abbreviations - I	MW	
GI-02	Instrument Symbols & Abbreviations - II	MW	
GI-03	Instrument Symbols & Abbreviations - III	MW	
GI-04	Control System Block Diagram	MW	
GI-05	PLC Panel Elevations	MW	
GI-06	Instrumentation Standard Details - I	MW	
GI-07	Instrumentation Standard Details - II	MW	

Code	Description	Company Officer \$180 Hourly Rate Hours	Prin. Professional \$144 Hourly Rate Hours	Sup. Professional \$103 Hourly Rate Hours	Sen. Professional \$92 Hourly Rate Hours	Senior Designer \$95 Hourly Rate Hours	Designer \$82 Hourly Rate Hours	CAD \$28 Hourly Rate Hours	Administrator \$75 Hourly Rate Hours	MW Labor Subtotal	Subcontractant Description Amount	Other Direct Costs Description Amount	Total	Code
Attachment 2 - Final Design/Bidding Support/Support Services/ During Construction														
Final Design Phase														
G00	General	16		320						\$35,800		Expenses \$1,900	\$37,700	009
G10	Construction Cost Estimate*											Expenses \$0	\$9,900	001
G20	Geotechnical Cooperation											Expenses \$0	\$1,950	006
G30	Supplemental Survey											Expenses \$0	\$0	000
G40	Contract Documents											Expenses \$0	\$0	000
10	General		60	80						\$18,800		Expenses \$1,900	\$19,700	009
3	Landscaping		480	24						\$124,800		Expenses \$0	\$124,800	009
6	Construction		192	8						\$60,000		Expenses \$0	\$60,000	009
8	Structural		70	840						\$110,200		Expenses \$0	\$110,200	009
12	Architectural		64	84						\$9,300		Expenses \$0	\$9,300	009
16	Mechanical		32	44,200						\$4,700		Expenses \$0	\$4,700	009
40	Mechanical		640	80						\$93,400		Expenses \$0	\$93,400	009
45	HVAC		90	1,308						\$13,100		Expenses \$0	\$13,100	009
109	Electrical		654	420						\$95,500		Expenses \$0	\$95,500	009
35	Instrumentation		70	420						\$10,200		Expenses \$0	\$10,200	009
399	Quality Management		80							\$11,700		Expenses \$0	\$11,700	004
004	Technical Review Sessions		510							\$77,400		Expenses \$0	\$77,400	005
005	Final Checklist		16							\$2,800		Expenses \$0	\$2,800	002
006	Public Relations Assistance		8							\$1,300		Expenses \$0	\$1,300	002
	Final Design Total									\$335,000			\$335,000	
Bidding Support Phase														
B01	Pre-Bid Meeting		8							\$1,200		Expenses \$0	\$1,200	001
B02	Responses to Questions		4							\$1,100		Expenses \$0	\$1,100	002
B03	Abstracts Preparation		80							\$11,200		Expenses \$0	\$11,200	003
B04	Bid Evaluation		4							\$600		Expenses \$0	\$600	004
	Bidding Support Total									\$25,000			\$25,000	
Final Design/Bidding Support Project Management														
P01	Project Management		760							\$62,000		Expenses \$0	\$62,000	005
P02	Project Management		760							\$62,000		Expenses \$0	\$62,000	005
	Project Management Total									\$124,000			\$124,000	
Final Design/Bidding Support Total														
										\$124,000			\$124,000	
Support Services/ During Construction														

City of Sacramento
 Sump 2 Rehabilitation and Improvement Project
 Phase 1 Design Development
 Phase 2 Final Design
 MBE/WBE Participation

City of Sacramento					
Sump 2 Improvements Project					
Subconsultant Summary					
Design Development					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$112,000	Easton	\$27,000	ATC Associates	\$2,500
Villalobas	\$6,000	Roberts	\$33,000	Dodson	\$45,000
Psomas	\$44,000	Koski Sullivan	\$2,000	Taylor	\$28,000
Beyaz & Patel	\$19,000			Westin	
Total	\$181,000		\$62,000		\$75,500
Percent	18.2%		6.2%		3.1%
Goal	10.57%		9.5%		NA
Final Design / Bidding Support					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$5,000	Easton	\$149,000	ATC Associates	\$2,000
Villalobas	\$8,000	Roberts	\$0	Dodson	\$342,000
Psomas	\$5,000	Koski Sullivan	\$5,000	Taylor	\$87,000
Beyaz & Patel	\$144,000				
Total	\$162,000		\$154,000		\$431,000
Percent	6.7%		6.3%		17.7%
Goal	10.57%		9.5%		NA
Support Services During Construction					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$10,000	Easton	\$26,000	ATC Associates	\$0
Villalobas	\$3,000	Roberts	\$0	Dodson	\$66,000
Psomas	\$0	Koski Sullivan	\$3,000	Taylor	\$26,000
Beyaz & Patel	\$52,000				
Total	\$65,000		\$29,000		\$92,000
Percent	5.0%		2.2%		7.0%
Goal	10.57%		9.5%		NA
Sump 2 Improvements Total					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$127,000	Easton	\$202,000	ATC Associates	\$4,500
Villalobas	\$17,000	Roberts	\$33,000	Dodson	\$453,000
Psomas	\$49,000	Koski Sullivan	\$10,000	Taylor	\$141,000
Beyaz & Patel	\$215,000				
Total	\$408,000		\$245,000		\$598,500
Percent	8.6%		5.2%		12.6%
Goal	10.57%		9.5%		NA

SUPPLEMENTAL AGREEMENT
Engineering Services Division

Project Title and Job Number: SUMP 2 REHABILITATION AND IMPROVEMENT PROJECT (PN:XM24)

Date: 5/27/97

Purchase Order #: 7XM2494904

Supplemental Agreement No.: 1

The City of Sacramento ("City") and Montgomery Watson Americas, Inc. ("Consultant"), as parties to that certain Consultant and Professional Services Agreement designated as Agreement Number 97-012, including any and all prior supplemental agreements modifying said agreement (said agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplemental and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

Consultant shall perform all work for Phase 2 - Final Design and Engineering Technical Services During Construction, as set forth in Amendment No. 1 (22 pages) attached hereto and incorporated herein by this reference.

2. In consideration of the additional and/or revised services described in Section 1 above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Consultant's fees and expenses, is increased/decreased by \$3,738,000.00, and said maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	\$ <u>997,000.00</u>
Net change by previous supplemental agreements:	\$ <u>0</u>
Not-to-exceed amount prior to this supplemental agreement:	\$ <u>997,000.00</u>
increase/decrease by this supplemental agreement:	\$ <u>3,738,000.00</u>
New not-to-exceed amount including all supplemental agreements:	\$ <u>4,735,000.00</u>

3. Consultant agrees that the amount of increase or decrease in the not-to-exceed amount specified in Section 2 above, shall constitute full compensation for the additional and/or revised services specified in Section 1, above, and shall fully compensate Consultant for any and all direct and indirect costs that may be incurred by Consultant in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Consultant.
4. Consultant warrants and represents that the person or persons executing this supplemental agreement on behalf of Consultant has or have been duly authorized by Consultant to sign this supplemental agreement and bind Consultant to the terms thereof.
5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Consultant shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended by:

Approved as to Form By:

Project Manager

Joe Adams

City Attorney

Approved By:

Steven J. Hyland
STEVEN J. HYLAND

Consultant

VICE PRESIDENT

Approved By:

Attested to By:

City of Sacramento

City Clerk

**AMENDMENT NO. 1
TO
CONSULTANT AND PROFESSIONAL SERVICES AGREEMENT
FOR
SUMP 2 IMPROVEMENTS PROJECT**

This Amendment No. 1 to the Consultant and Professional Engineering Services Agreement between the City of Sacramento (CITY) and Montgomery Watson Americas Inc. (MW) dated February 4, 1997 for the Sump 2 Improvements project (PROJECT) modifies the existing Agreement and provides for additional engineering services. References contained herein to the CITY shall also include authorized representatives designated by the CITY. The additional engineering services will be provided for the Final Design, Bidding Support, and Support Services During Construction phases of the subject project as described herein.

Changes to the Project Overview and Basis of Design. The Project Overview and Basis of Design described in Exhibit A - Scope of Services of the existing Agreement will be modified as follows:

Delete the second sentence of the first paragraph under Project Overview and replace with the following:

The project will increase the nominal design flow capacity of the Sump 2 facility from 530 mgd to 740 mgd and include mechanical screening and standby electrical power for the nominal design flow capacity.

Delete Item C6 under Basis of Design and replace with the following:

C6. Modification of existing Control Room to accommodate new computer cabinet, three control workstations, and remodeled men and women rest rooms.

Delete Item C7 under Basis of Design and replace with the following:

C7. Rehabilitation and upgrade of the existing Sump 2 Pump Station HVAC system.

Delete Item D3 under Basis of Design and replace with the following:

D3. Relocation of existing control functions for the existing High Lift Pumps from the Headhouse control room to the new Sump 2A Pump Station electrical room.

Delete Item D4 under Basis of Design and replace with the following:

D4. Revision of electrical feed service for the existing High Lift Pumps to provide electrical power from the new Sump 2A Pump Station electrical room.

Delete Item E8 under Basis of Design.

City of Sacramento
Sump 2 Rehabilitation and Improvement Project
Phase 2 Final Design
Exhibit A - Scope of Services

Final Design. Final Design will be based on the Design Development phase of the PROJECT and will consist of the production of specifications and drawings for one construction contract.

MW will be responsible to provide the following elements:

- G09 Construction Cost Estimate. Estimate construction cost in accordance with American Association of Cost Estimators guidelines at the 50 percent design phase with an estimated accuracy of +/- 25 percent, at the 90 percent design phase with an estimated accuracy of +/- 10 percent, and at the Final Design stage with an estimated accuracy of +/- 10 percent.
- G10 Geotechnical Coordination. Review technical specifications for coordination with the Geotechnical Report recommendations.
- C06 Supplemental Survey. Provide supplemental survey information as needed to field verify critical dimensions and elevations based on a maximum of three days of two-person survey party.
- CD01 Contract Documents. Prepare technical specifications and assist the bid evaluation for the prepurchase of the following major equipment:
 - Mechanical Trash Racks/Mechanical Bar Screens
 - Vertical Non-Clog Centrifugal Pumps With Electrical Motors
 - Engine-Generator Sets
 - Clean Power Variable Frequency Drives
 - Electrical Switchgear and Motor Control Centers

The City will be responsible for the preparation of all documents other than the technical specifications; assembly and printing of the prepurchase documents; and the advertisement and bidding of the prepurchase equipment.

Prepare contract specifications for the bidding and construction of the Sump 2 Rehabilitation and Improvement project including Division 00 - Bidding Requirements, Contract Forms, General Conditions, and Supplementary Conditions; Division 01 - General Requirements; and Divisions 02 through 17 - Technical Specifications. Prepare contract drawings for the bidding and construction of the Sump 2 Improvement project. The anticipated list of contract drawings are presented in Attachment 1 - List of Drawings for reference.

- Q04 Technical Review Sessions. Conduct technical review sessions with City and MW project team staff to review and discuss the 50 percent and 90 percent design phase submittals. The 50 percent review will incorporate a constructability and bidability review.
- Q05 Final Checking. Check the final contract specifications and drawings for potential errors and omissions and for coordination between the design disciplines. Incorporate final review comments provided by the City.
- P02 Public Relations Assistance. Provide assistance with Lucy Roberts Public Relations under the direction of the City to support the City's public relations program for the Sump 2 Improvement project in accordance with the scope of services presented in Attachment 1 of the Phase 1 Design Development Exhibit A - Scope of Services.

Bidding Support. After completion of the Final Design phase, the Bidding Support phase will commence. MW will be responsible to provide the following elements:

- B01 Assistance at Pre-Bid Meeting. Assist City conduct pre-bid meeting and tour of project site.
- B02 Responses to Questions. Assist City prepare responses to technical questions about the contract requirements from prospective bidders, subcontractors, and suppliers during the advertisement period.
- B03 Addenda Preparation. Assist City prepare and issue addenda to the contract specifications and drawings during the advertisement period to clarify and revise project requirements.
- B04 Bid Evaluation. Assist City review the qualifications of bidders and formality of bid documents for award to the lowest responsible, responsive bidder.
- B05 Conformed Specifications and Drawings. Prepare conformed specifications and drawings based on all addenda issued. Reproduce 50 copies of conformed specifications and half-sized drawings and 20 full-size sets of blue line drawings.

Support Services During Construction. Montgomery Watson (MW) will provide engineering support services during construction to assist the CITY with the construction management of the PROJECT. In providing the engineering support services described below, MW will serve in a support role to the CITY during construction. The construction firm selected by the CITY to perform the project construction (CONTRACTOR) will have sole responsibility for planning, directing, scheduling, providing, and managing the manpower, equipment, and material necessary for construction.

CITY acknowledges that during construction unforeseen field conditions or errors or omissions will normally occur and result in change orders issued to the CONTRACTOR. The CITY also acknowledges that on a project as large and complex as the Sump 2 Improvements, it would not be unusual for such change orders to total five percent of the construction cost.

Engineering support services during construction will be provided to assist the CITY with technical services, office engineering services, and O&M manual. MW will be responsible to provide the following elements:

Technical Services

MW will provide at the job-site, upon the request of the CITY, general and specific support as described below to assist the CITY inspect the CONTRACTOR's work to ensure compliance with the Contract Documents and design intent.

- TS01 Preconstruction Conference. Attend the preconstruction conference that will address all project administration and reporting procedures, team roles and responsibilities, and other procedures.

City of Sacramento
Sump 2 Rehabilitation and Improvement Project
Phase 2 Final Design
Exhibit A - Scope of Services

- TS02 Weekly Progress Meetings. Attend weekly on-site progress meetings that will address construction progress, problem areas, and proposed resolutions. A MW representative of the design team will attend these meetings to facilitate overall communications, provide information, and assist prompt resolution of potential problems.
- TS03 Technical Meetings. Assist City conduct special technical meetings to address and resolve technical construction issues.
- TS04 Project Close-out. Assist the City implement the project close-out procedures required by the Contract Documents. Assist CITY confirm the satisfactory completion of all contract and change order work and perform a final project walk through to assist preparation of the final punchlist.

Office Engineering Services

The following engineering services will be provided by the design team during construction:

- OE01 Submittal Review. Review shop drawings of materials and equipment submitted by the CONTRACTOR for conformance with the Contract Documents.
- OE02 RFIs. Assist the CITY respond to Requests for Information (RFIs) pertaining to the Contract Specifications and Drawings. Prepare elementary sketches, if required, to clarify the design.
- OE03 Substitutions. Assist the CITY evaluate material and equipment substitutions that may be proposed during construction.
- OE04 Change Orders. Assist the CITY review potential change orders and prepare any related revisions of the Contract Specifications and Drawings.
- OE05 Site Visits. Provide periodic site visits by members of the design team to assist the inspection of civil, structural, architectural, mechanical, HVAC, electrical, and instrumentation and control work for conformance with the Contract Specifications and Drawings.
- OE06 Factory Site Visits. Assist the CITY with factory inspections. MW has a nationwide staff that is available to provide cost-effective off-site inspections.
- OE07 Geotechnical Services. MW will subcontract with the design geotechnical engineer to serve as a resource for the CITY to address issues relating to dewatering, shoring, excavation, backfill and compaction, settlement, liquifiable soils, pipe and structure foundation adequacy, and other geotechnical concerns. The design geotechnical engineer will prepare brief written site visit reports to document their findings and recommendations and provide them to the CITY and MW.
- OE08 Programming. Assist the CITY in programming the PLCs and SCADA system computer terminals. MW will provide a level of assistance which is anticipated to be approximately 50 percent of the effort needed to program, troubleshoot, and startup the PLCs and SCADA system.

OE09 Record Drawings. Assist the CITY reconcile the CITY's markups of contract drawings with those prepared by the CONTRACTOR's at the end of the project. MW will then revise the original CAD drawing files to reflect the changes that have occurred during construction. One set of reproducible and three sets of blueline prints of the final record drawings will be delivered to the CITY.

O&M Services

OM01 Operations Manual Outline. Prepare and submit a comprehensive outline and list of figures for the proposed Operations Manual to the CITY prior to 50 percent completion of construction. The Operations Manual content will incorporate applicable sections of the existing operations manual for the Sump 2 Pump Station. After CITY review, MW will meet with the designated CITY representative to incorporate CITY comments.

OM02 Operations Manual Preparation. Based on the approved outline, prepare an Operations Manual that includes the following items:

- Overview description
- Process and major equipment descriptions
- Summary of data and operating criteria for equipment
- Electrical controls, instrumentation, and PLC control logic
- Startup procedures
- Routine operational procedures
- Shutdown procedures
- Alarm response and emergency procedures
- Equipment maintenance identification numbers
- Schematic piping diagrams and process flow diagrams to support text.

As draft chapters are completed, MW will forward two copies to the CITY for their review. In conjunction with CITY review, MW will perform an in-house review of the initial draft chapters to assure quality control and adherence to the design intent.

After CITY review and approval and prior to 95 percent completion of construction (30 days prior to startup), MW will deliver the Operations Manual in 3-ring, vinyl covered binders with printed covers, topic index, and printed divider tabs. The Operations Manual will consist of approximately 100 to 120 pages of text and 9 to 11 figures.

OM03 Operations Manual Revisions. . Revise the Operations Manual approximately six months after startup to reflect as-built conditions and operation based on CITY input. Deliver the revised pages and figures to the CITY within 30 days following CITY input.

OM04 Technical Manuals. Develop a format for maintenance data summary sheets in consultation with the CITY. Review Contractor-furnished or vendor-furnished O&M submittals, including the equipment O&M manuals and maintenance data summary sheets. Ensure that submittals include necessary and pertinent information and that submittals are complete and acceptable for use by the CITY. Compile and deliver the approved manuals to the CITY.

- OM05 Start-up Assistance. MW will provide technical assistance during equipment testing and facility startup to aid the transition from the construction phase to the operations phase.
- OM06 Start-up Training. MW will develop an operator training program based on the draft Operations Manual. MW will submit an outline of the proposed operator training program for CITY review and comment. MW will provide classroom presentation, field orientation, and question and answer sessions. Training will be tailored to cover the system relationships that are not typically covered by the equipment manufacturers.

Services Provided by the CITY

The following services and responsibilities will be provided by the CITY:

1. **Legal Services.** Legal services related to contract review, bidding irregularities, protests, claims, and related items.
2. **Project Administration.** Responsibility and authority to approve any changes to the specifications, plans, or other contractual obligations of the CITY.
3. **Financial Administration.** Books of account for the receipts and disbursements associated with the project necessary for fiscal control. The CITY will coordinate progress payment and change order costs to facilitate proper financial administration.
4. **Permits.** All permit applications, fees, agency approvals, and coordination thereof.
5. **Field Office Trailer.** One fully equipped field office trailer for the use of the CITY's and MW's staff.
6. **Materials Testing.** Supplemental soils compaction, concrete strength, and other materials testing, as necessary, to ensure the work's contract compliance. Complete logs of all compaction testing results will be maintained to ensure that all failing tests are covered by a passing retest, as well as documentation for future reference.
7. **Verification Surveying.** Surveying services to verify CONTRACTOR's general layout of structures and to verify elevations on various structures as necessary to confirm compliance with the Drawings.
8. **Field Files.** Project files at the job site.
9. **Change Orders.** Change order process to defend against unwarranted change orders and to obtain a fair and reasonable price for those items determined to be valid extra-work items.
10. **Claims Management.** Tracking and management all extra work items and resolution of all potential claims with the assistance of MW when requested.

Optional Services

Upon the CITY's written request, MW will provide the CITY optional services should they be needed during project construction. The additional scope and associated costs will be negotiated with the CITY at the time that the optional services are requested. Optional services include, but not limited to, the following:

- Hazardous waste characterization, remediation, and cleanup/disposal services
- Updating the Combined Sewer System operations manual
- O&M support services
- Supplemental claims mitigation support
- Supplemental surveying services
- Additional field services.

Deliverables

MW will be responsible to provide the deliverables indicated in the table below.

Description	No.	Schedule
<u>Phase 2 Final Design</u>		
• Prepurchase Technical Specifications	1	Sept. 30, 1997
• 50 Percent Construction Cost Estimate	10	Sept. 12, 1997
• Final Construction Cost Estimate	10	Jan. 02, 1998
• 50 Percent Submittal	25	Aug. 29, 1997
• 90 Percent Submittal	25	Nov. 24, 1997
• Construction Contract Documents	200	Jan. 02, 1998
<u>Bidding Support</u>		
• Addenda	200	As needed
<u>Support Services During Construction</u>		
• Record Drawings	40	Nov. 30, 2000
• O&M Manual Outline	10	Jan. 08, 1999
• Draft O&M Manual	10	Sept. 03, 1999
• Final O&M Manual	10	Sept. 29, 2000
• Technical Manual	10	Sept. 03, 1999

Fee Schedule

The total of all fees and expenses to be paid to CONSULTANT for the additional engineering services described in this amendment shall not exceed \$2,432,000 for Final Design/Bidding Support and shall not exceed \$1,306,000 for Support Services During Construction (refer to Attachment 2 - Final Design/Bidding Support /Support Services During Construction Budget) without prior written approval of the City.

The estimated budget for Support Services During Construction is based on the following assumptions:

1. The duration for substantial completion of Phase A construction is approximately 75 weeks and the overall duration for completion of Phase A and Phase B construction is approximately 136 weeks.
2. MW will attend 100 weekly progress meetings.
3. MW will attend 25 technical meetings.
4. MW will review up to 330 submittals and resubmittals.
5. MW will review up to 225 RFIs.
6. MW will review up to 20 substitutions.
7. MW will review and prepare up to 130 change orders.
8. MW will conduct up to 80 site visits.
9. MW will conduct up to 5 factory site visits.
10. MW will provide up to 750 hours of PLC and SCADA system programming assistance.
11. MW will provide 10 draft Operations Manuals, 10 final Operations Manuals, and 10 Technical Manuals.
12. MW will provide up to 120 hours of startup assistance and up to 80 hours of startup training.

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

Attachment 1 - List of Drawings			
Dwg. No.	Title	Responsible Arch/Engr	Comments
General			
G-01	Cover Sheet	MW	
G-02	Vicinity Map/Location Map	MW	
G-03	List of Drawings - I	MW	
G-04	List of Drawings - II	MW	
G-05	Abbreviations	MW	
G-06	Symbols	MW	
G-07	Process Flow Schematic/Design Criteria	MW	
G-08	Hydraulic Profile	MW	
G-09	Sequence of Construction	MW	
G-10	Piping Schedule	MW	
Civil			
Site			
50C-01	Site Plan	MW	1"=20'
50C-02	Horizontal Control/Soil Boring Locations	MW	1"=20'
50C-03	Demolition Plan	MW	1"=20'
50C-04	Soil Stabilization Plan	MW	1"=20'
50C-05	Grading and Drainage Plan	MW	1"=20'
50C-06	Paving Plan	MW	1"=20'
50C-07	Utility Piping Plan	MW	1"=20'
50C-08	Major Yard Piping Plan	MW	1"=20'
50C-09	Santa Buena Way Corridor	MW	1"=20'
50C-10	Yard Piping Profiles - I	MW	1"=20'
50C-11	Yard Piping Profiles - II	MW	1"=20'
50C-12	Yard Piping Profiles - III	MW	1"=20'
50C-13	Yard Piping Details	MW	
50C-14	Regional Valve Vault	MW	
50C-15	CWTP Valve Vault	MW	
Combined Sewer System			
59C-01	CSS Monitoring Station Plan - I	MW	
59C-02	CSS Monitoring Station Plan - II	MW	
59C-03	CSS Monitoring Station Plan - III	MW	
59C-04	CSS Monitoring Station Plan - IV	MW	
59C-05	CSS Monitoring Station Plan - V	MW	
General			
GC-01	Civil Standard Details - I	MW	
GC-02	Civil Standard Details - II	MW	
GC-03	Civil Standard Details - III	MW	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

	Landscaping		
	<u>Site</u>		
50L-01	Planting Plan	Koski Sullivan	1"=20'
50L-02	Irrigation Plan	Koski Sullivan	1"=20'
	<u>General</u>		
GL-01	Landscaping Standard Details - I	Koski Sullivan	
	Cathodic Protection		
	<u>Site</u>		
50CP-01	Cathodic Protection Plan	V&A	1"=20'
	<u>General</u>		
GCP-01	Cathodic Protection Standard Details - I	V&A	
GCP-02	Cathodic Protection Standard Details - II	V&A	
	Demolition		
	<u>Site</u>		
50D-01	Grit Basin/Aeration Basin Plan	MW	
50D-02	Grit Basin/Aeration Basin Section	MW	
50D-03	Clarifier/Contact Basin Plan	MW	
50D-04	Clarifier/Contact Basin Section	MW	
50D-05	Filter Plan	MW	
50D-06	Filter Section	MW	
50D-07	Backwash Pump Plan & Section	MW	
50D-08	Exist. Sump 2 Wet Well No. 1-3 Entrance	MW	
	Structural		
	<u>Site</u>		
50S-01	Foul Air Scrubber Plan	MW	
50S-02	Foul Air Scrubber Sections	MW	
50S-03	Land Park/Donner Trunk Sewer Plan	MW	
50S-04	Land Park/Donner Trunk Sewer Sections	MW	
50S-05	Regional Valve Vault Plan & Sections	MW	
50S-06	CWTP Valve Vault Plan & Sections	MW	
	Existing Sump 2 Pump Station		
51S-01	Stage 1 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51S-02	Stage 2 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51S-03	Stage 1 Deck Plan - Demolition	MW	1/4"=1'-0"
51S-04	Stage 2 Deck Plan - Demolition	MW	1/4"=1'-0"
51S-05	Stage 1 First Floor Plan - Demolition	MW	1/4"=1'-0"
51S-06	Stage 2 First Floor Plan - Demolition	MW	1/4"=1'-0"
51S-07	Stage 1 Roof Plan - Demolition	MW	1/4"=1'-0"
51S-08	Stage 2 Roof Plan - Demolition	MW	1/4"=1'-0"
51S-09	Stage 1 Lower Floor Plan	MW	1/4"=1'-0"
51S-10	Stage 2 Lower Floor Plan	MW	1/4"=1'-0"

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

51S-11	Stage 1 Deck Plan	MW	1/4"=1'-0"
51S-12	Stage 2 Deck Plan	MW	1/4"=1'-0"
51S-13	Stage 1 First Floor Plan	MW	1/4"=1'-0"
51S-14	Stage 2 First Floor Plan	MW	1/4"=1'-0"
51S-15	Stage 1 Roof Plan	MW	1/4"=1'-0"
51S-16	Stage 2 Roof Plan	MW	1/4"=1'-0"
51S-17	Cross Section A	MW	
51S-18	Cross Section B	MW	
51S-19	Longitudinal Section C	MW	
51S-20	Longitudinal Section D	MW	
51S-21	Sections I	MW	
51S-22	Sections II	MW	
51S-23	Sections III	MW	
51S-24	Details I	MW	
51S-25	Details II	MW	
51S-26	Details III	MW	
	<u>Flow Control Structure</u>		
	(None)		
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
54S-01	Plan	MW	
54S-02	Sections	MW	
	<u>New Sump 2A Pump Station</u>		
56S-01	South Foundation Plan	B&P	1/4"=1'-0"
56S-02	North Foundation Plan	B&P	1/4"=1'-0"
56S-03	South Lower Floor Plan	B&P	1/4"=1'-0"
56S-04	North Lower Floor Plan	B&P	1/4"=1'-0"
56S-05	South Deck Plan	B&P	1/4"=1'-0"
56S-06	North Deck Plan	B&P	1/4"=1'-0"
56S-07	South First Floor Plan	B&P	1/4"=1'-0"
56S-08	North First Floor Plan	B&P	1/4"=1'-0"
56S-09	South Roof Plan	B&P	1/4"=1'-0"
56S-10	North Roof Plan	B&P	1/4"=1'-0"
56S-11	Cross Section A	B&P	
56S-12	Cross Section B	B&P	
56S-13	Longitudinal Section C	B&P	
56S-14	Longitudinal Section D	B&P	
56S-15	Sections I	B&P	
56S-16	Sections II	B&P	
56S-17	Sections III	B&P	
56S-18	Details I	B&P	
56S-19	Details II	B&P	
56S-20	Details III	B&P	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

	<u>Standby Power Building</u>		
57S-01	Switchgear Room Foundation Plan	B&P	1/4"=1'-0"
57S-02	Engine-Generator Room Foundation Plan	B&P	1/4"=1'-0"
57S-03	Switchgear Room First Floor Plan	B&P	1/4"=1'-0"
57S-04	Engine-Generator Room First Floor Plan	B&P	1/4"=1'-0"
57S-05	Switchgear Room Roof Plan	B&P	1/4"=1'-0"
57S-06	Engine-Generator Room Roof Plan	B&P	1/4"=1'-0"
57S-07	Cross Section A	B&P	
57S-08	Cross Section B	B&P	
57S-09	Longitudinal Section C	B&P	
57S-10	Sections I	B&P	
57S-11	Sections II	B&P	
57S-12	Sections III	B&P	
57S-13	Details I	B&P	
57S-14	Details II	B&P	
57S-15	Details III	B&P	
	<u>General</u>		
GS-01	Structural Standard Details I	MW	
GS-02	Structural Standard Details II	MW	
GS-03	Structural Standard Details III	MW	
GS-04	Structural Standard Details IV	MW	
GS-05	Structural Standard Details V	MW	
GS-06	Structural Standard Details VI	MW	
	<u>Architectural</u>		
	<u>Existing Sump 2 Pump Station</u>		
51A-01	Stage 1 First Floor Plan	Easton	1/4"=1'-0"
51A-02	Stage 2 First Floor Plan	Easton	1/4"=1'-0"
51A-03	Control Room Floor Plan	Easton	1/4"=1'-0"
51A-04	Control Room Reflected Ceiling Plan	Easton	1/4"=1'-0"
51A-05	Control Room Interior Elevations - I	Easton	
51A-06	Sections - I	Easton	
51A-07	Details - I	Easton	
	<u>Flow Control Structure</u>		
	(None)		
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
	(None)		
	<u>New Sump 2A Pump Station</u>		
56A-01	South First Floor Plan	Easton	1/4"=1'-0"
56A-02	North First Floor Plan	Easton	1/4"=1'-0"
56A-03	South Roof Plan	Easton	1/4"=1'-0"
56A-04	North Roof Plan	Easton	1/4"=1'-0"
56A-05	East & South Exterior Elevations	Easton	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

56A-06	West & North Exterior Elevations	Easton	
56A-07	Sections - I	Easton	
56A-08	Sections - II	Easton	
56A-09	Details - I	Easton	
	<u>Standby Power Building</u>		
57A-01	Switchgear Room First Floor Plan	Easton	1/4"=1'-0"
57A-02	Engine-Generator Room First Floor Plan	Easton	1/4"=1'-0"
57A-03	Switchgear Room Roof Plan	Easton	1/4"=1'-0"
57A-04	Engine-Generator Room Roof Plan	Easton	1/4"=1'-0"
57A-05	East & South Exterior Elevations	Easton	
57A-06	West & North Exterior Elevations	Easton	
57A-07	Sections - I	Easton	
57A-08	Sections - II	Easton	
57A-09	Details - I	Easton	
	<u>General</u>		
GA-01	Architectural Symbols	Easton	
GA-02	Door/Window Schedules	Easton	
GA-03	Room Finish Schedules	Easton	
GA-04	Architectural Standard Details - I	Easton	
GA-05	Architectural Standard Details - II	Easton	
GA-06	Architectural Standard Details - III	Easton	
GA-07	Architectural Standard Details - IV	Easton	
	<u>Mechanical</u>		
	<u>Site</u>		
50M-01	Foul Air Scrubber Plan	MW	
50M-02	Foul Air Scrubber Sections	MW	
	<u>Existing Sump 2 Pump Station</u>		
51M-01	Stage 1 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51M-02	Stage 2 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51M-03	Stage 1 Deck Plan - Demolition	MW	1/4"=1'-0"
51M-04	Stage 2 Deck Plan - Demolition	MW	1/4"=1'-0"
51M-05	Stage 1 First Floor Plan - Demolition	MW	1/4"=1'-0"
51M-06	Stage 2 First Floor Plan - Demolition	MW	1/4"=1'-0"
51M-07	Stage 1 Lower Floor Plan	MW	1/4"=1'-0"
51M-08	Stage 2 Lower Floor Plan	MW	1/4"=1'-0"
51M-09	Stage 1 Deck Plan	MW	1/4"=1'-0"
51M-10	Stage 2 Deck Plan	MW	1/4"=1'-0"
51M-11	Stage 1 First Floor Plan	MW	1/4"=1'-0"
51M-12	Stage 2 First Floor Plan	MW	1/4"=1'-0"
51M-13	Cross Section A	MW	
51M-14	Cross Section B	MW	
51M-15	Longitudinal Section C	MW	
51M-16	Longitudinal Section D	MW	
51M-17	Sections I	MW	
51M-18	Sections II	MW	
51M-19	Details I	MW	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

51M-20	Details II	MW	
	<u>Flow Control Structure</u>		
52M-01	Check Valve Plan & Section	MW	
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
54-M-01	Plan	MW	
54-M-02	Sections & Details	MW	
	<u>New Sump 2A Pump Station</u>		
56M-01	South Lower Floor Plan	GSD	1/4"=1'-0"
56M-02	North Lower Floor Plan	GSD	1/4"=1'-0"
56M-03	South Deck Plan	GSD	1/4"=1'-0"
56M-04	North Deck Plan	GSD	1/4"=1'-0"
56M-05	South First Floor Plan	GSD	1/4"=1'-0"
56M-06	North First Floor Plan	GSD	1/4"=1'-0"
56M-07	South Utility Plan	GSD	1/4"=1'-0"
56M-08	North Utility Plan	GSD	1/4"=1'-0"
56M-09	Cross Section A	GSD	
56M-10	Cross Section B	GSD	
56M-11	Longitudinal Section C	GSD	
56M-12	Longitudinal Section D	GSD	
56M-13	Sections I	GSD	
56M-14	Sections II	GSD	
56M-15	Details I	GSD	
56M-16	Details II	GSD	
	<u>Standby Power Building</u>		
57M-01	Switchgear Room First Floor Plan	MW	1/4"=1'-0"
57M-02	Engine-Generator Room First Floor Plan	MW	1/4"=1'-0"
57M-03	Cross Section A	MW	
57M-04	Cross Section B	MW	
57M-05	Longitudinal Section C	MW	
57M-06	Sections I	MW	
57M-07	Sections II	MW	
57M-08	Details I	MW	
57M-09	Details II	MW	
	<u>General</u>		
GM-01	Pump/Equipment/Gate/Valve Schedules	MW	
GM-02	Mechanical Standard Details I	MW	
GM-03	Mechanical Standard Details II	MW	
GM-04	Mechanical Standard Details III	MW	
GM-05	Mechanical Standard Details IV	MW	
GM-06	Mechanical Standard Details V	MW	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

HVAC				
<u>Existing Sump 2 Pump Station</u>				
51H-01	Stage 1 Lower Floor Plan - Demolition	Taylor		1/4" = 1'-0"
51H-02	Stage 1 Deck Plan - Demolition	Taylor		1/4" = 1'-0"
51H-03	Stage 1 First Floor Plan - Demolition	Taylor		1/4" = 1'-0"
51H-04	Stage 1 Roof Plan - Demolition	Taylor		1/4" = 1'-0"
51H-05	Stage 1 First Floor Plan	Taylor		1/4" = 1'-0"
51H-06	Stage 2 First Floor Plan	Taylor		1/4" = 1'-0"
51H-07	Cross Section A	Taylor		
51H-08	Cross Section B	Taylor		
51H-09	Longitudinal Section C	Taylor		
51H-10	Sections I	Taylor		
51H-11	Details I	Taylor		
<u>Flow Control Structure</u>				
52H-01	Foul Air Connection	Taylor		
<u>Riverside Headhouse</u>				
(None)				
<u>Utility Water Pump Station</u>				
(None)				
<u>New Sump 2A Pump Station</u>				
56H-01	South Lower Floor Plan	Taylor		1/4" = 1'-0"
56H-02	North Lower Floor Plan	Taylor		1/4" = 1'-0"
56H-03	South Deck Plan	Taylor		1/4" = 1'-0"
56H-04	North Deck Plan	Taylor		1/4" = 1'-0"
56H-05	South First Floor Plan	Taylor		1/4" = 1'-0"
56H-06	North First Floor Plan	Taylor		1/4" = 1'-0"
56H-07	South Roof Plan	Taylor		1/4" = 1'-0"
56H-08	North Roof Plan	Taylor		1/4" = 1'-0"
56H-09	Cross Section A	Taylor		
56H-10	Cross Section B	Taylor		
56H-11	Longitudinal Section C	Taylor		
56H-12	Longitudinal Section D	Taylor		
56H-13	Sections I	Taylor		
56H-14	Details I	Taylor		
<u>Standby Power Building</u>				
57H-01	Switchgear Room First Floor Plan	Taylor		1/4" = 1'-0"
57H-02	Engine-Generator Room First Floor Plan	Taylor		1/4" = 1'-0"
57H-03	Switchgear Room Roof Plan	Taylor		1/4" = 1'-0"
57H-04	Engine-Generator Room Roof Plan	Taylor		1/4" = 1'-0"
57H-05	Cross Section A	Taylor		
57H-06	Cross Section B	Taylor		
57H-07	Longitudinal Section C	Taylor		
57H-08	Sections I	Taylor		
57H-09	Details I	Taylor		

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

	<u>General</u>		
GH-01	Existing Sump 2 PS HVAC Schematic	Taylor	
GH-02	New Sump 2A PS HVAC Schematic		
GH-03	Standby Power Building HVAC Schematic	Taylor	
GH-04	Foul Air HVAC Schematic	Taylor	
GH-05	HVAC Schedules - I	Taylor	
GH-06	HVAC Schedules - II	Taylor	
GH-07	HVAC Standard Details I	Taylor	
GH-08	HVAC Standard Details II	Taylor	
GH-09	HVAC Standard Details III	Taylor	
GH-10	HVAC Standard Details IV	Taylor	
	<u>Electrical</u>		
	<u>Site</u>		
50E-01	Foul Air Scrubber Plan	MW	
50E-02	High Lift Pump Station Plan	MW	
	<u>Existing Sump 2 Pump Station</u>		
51E-01	Stage 1 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51E-02	Stage 2 Lower Floor Plan - Demolition	MW	1/4"=1'-0"
51E-03	Stage 1 First Floor Plan - Demolition	MW	1/4"=1'-0"
51E-04	Stage 2 First Floor Plan - Demolition	MW	1/4"=1'-0"
51E-05	Control Room - Demolition	MW	
51E-06	Stage 1 Lower Floor Plan - Equipment	MW	1/4"=1'-0"
51E-07	Stage 2 Lower Floor Plan - Equipment	MW	1/4"=1'-0"
51E-08	Stage 1 First Floor Plan - Equipment	MW	1/4"=1'-0"
51E-09	Stage 2 First Floor Plan - Equipment	MW	1/4"=1'-0"
51E-10	Control Room - Equipment	MW	
51E-11	Stage 1 Lower Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-12	Stage 2 Lower Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-13	Stage 1 First Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-14	Stage 2 First Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
51E-15	Control Room - Ltg & Grdg	MW	
51E-16	Cross Section A	MW	
51E-17	Cross Section B	MW	
51E-18	Longitudinal Section C	MW	
	<u>Flow Control Structure</u>		
	(None)		
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
54E-01	Plan	MW	
	<u>New Sump 2A Pump Station</u>		
56E-01	South Lower Floor Plan - Equipment	MW	1/4"=1'-0"
56E-02	North Lower Floor Plan - Equipment	MW	1/4"=1'-0"
56E-03	South Deck Plan - Equipment	MW	1/4"=1'-0"

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

56E-04	North Deck Plan - Equipment	MW	1/4"=1'-0"
56E-05	South First Floor Plan - Equipment	MW	1/4"=1'-0"
56E-06	North First Floor Plan - Equipment	MW	1/4"=1'-0"
56E-07	South Roof Plan - Equipment	MW	1/4"=1'-0"
56E-08	North Roof Plan - Equipment	MW	1/4"=1'-0"
56E-09	South Lower Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-10	North Lower Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-11	South Deck Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-12	North Deck Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-13	South First Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-14	North First Floor Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-15	South Roof Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-16	North Roof Plan - Ltg & Grdg	MW	1/4"=1'-0"
56E-17	Cross Section A	MW	
56E-18	Cross Section B	MW	
56E-19	Longitudinal Section C	MW	
56E-20	Longitudinal Section D	MW	
	<u>Standby Power Building</u>		
57E-01	Switchgear Room First Floor - Equip	MW	1/4"=1'-0"
57E-02	Engine-Generator Room First Floor - Equip	MW	1/4"=1'-0"
57E-03	Switchgear Room Roof - Equip	MW	1/4"=1'-0"
57E-04	Engine-Generator Room Roof - Equip	MW	1/4"=1'-0"
57E-05	Switchgear Room First Floor - Ltg	MW	1/4"=1'-0"
57E-06	Engine-Generator Room First Floor - Ltg	MW	1/4"=1'-0"
57E-07	Cross Section A	MW	
57E-08	Cross Section B	MW	
57E-09	Longitudinal Section C	MW	
	<u>Combined Sewer System</u>		
59E-01	CSS Monitoring Station Plan - I	MW	
59E-02	CSS Monitoring Station Plan - II	MW	
59E-03	CSS Monitoring Station Plan - III	MW	
59E-04	CSS Monitoring Station Plan - IV	MW	
59E-05	CSS Monitoring Station Plan - V	MW	
	<u>General</u>		
GE-01	Electrical Symbols	MW	
GE-02	Electrical Abbreviations	MW	
GE-03	Electrical Key Site Plan	MW	1"=20'
GE-04	Electrical Site Plan - Power	MW	1"=20'
GE-05	Electrical Site Plan - Lighting	MW	1"=20'
GE-06	Main Distribution Single Line Diagram	MW	
GE-07	2400 V Substation Single Line Diagram	MW	
GE-08	480 V Substation Single Line Diagram	MW	
GE-09	Generator Switchgear Single Line Diagram	MW	
GE-10	Exist. Distrib. Single Line Diagram - I	MW	
GE-11	Exist. Distrib. Single Line Diagram - II	MW	
GE-12	Riverside Distrib. Single Line Diagram	MW	
GE-13	Substation/VFD Single Line Diagram - I	MW	
GE-14	Substation/VFD Single Line Diagram - II	MW	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

GE-15	MCC Single Line Diagram - I	MW	
GE-16	MCC Single Line Diagram - II	MW	
GE-17	MCC Single Line Diagram - III	MW	
GE-18	Panelboard Single Line Diagram	MW	
GE-19	Main Switchgear Elevation	MW	
GE-20	Generator Switchgear Elevation	MW	
GE-21	Substation Elevation	MW	
GE-22	VFD Elevations	MW	
GE-23	MCC Elevations	MW	
GE-24	Riverside MCC Elevation	MW	
GE-25	Monitoring & Control System (IMPAC)	MW	
GE-26	Communications System Block Diagram	MW	
GE-27	Security System Block Diagram	MW	
GE-28	Fire System Block diagram	MW	
GE-29	Control Schematics - I	MW	
GE-30	Control Schematics - II	MW	
GE-31	Control Schematics - III	MW	
GE-32	Control Schematics - IV	MW	
GE-33	Control Schematics - V	MW	
GE-34	Control Schematics - VI	MW	
GE-35	Panelboard Schedules - I	MW	
GE-36	Panelboard Schedules - II	MW	
GE-37	Lighting Fixture Schedule	MW	
GE-38	Ductbank/Manhole Schedule	MW	
GE-39	Conduit Development Diagram - 1	MW	
GE-40	Conduit Development Diagram - 2	MW	
GE-41	Conduit Development Diagram - 3	MW	
GE-42	Conduit Development Diagram - 4	MW	
GE-43	Conduit Development Diagram - 5	MW	
GE-44	Conduit Development Diagram - 6	MW	
GE-45	Conduit Development Diagram - 7	MW	
GE-46	Conduit Development Diagram - 8	MW	
GE-47	Conduit Development Diagram - 9	MW	
GE-48	Conduit Development Diagram - 10	MW	
GE-49	Sample Electrical Interconnection Diagram	MW	
GE-50	Electrical Standard Details I	MW	
GE-51	Electrical Standard Details II	MW	
GE-52	Electrical Standard Details III	MW	
GE-53	Electrical Standard Details IV	MW	
GE-54	Electrical Standard Details V	MW	
	Instrumentation		
50I-01	Foul Air P&ID	MW	
	<u>Existing Sump 2 Pump Station</u>		
51I-01	Existing Pumps 1-4 P&ID	MW	
51I-02	Existing Pumps 5-8 P&ID	MW	
51I-03	Existing Pumps 9-11 P&ID	MW	
51I-04	Vacuum Priming System P&ID	MW	
51I-05	Utility Water System P&ID	MW	

City of Sacramento Combined Sewer System
 Sump 2 Rehabilitation and Improvement Project
 Phase 2 Final Design
 Exhibit A - Scope of Services

511-06	Instrument Air System P&ID	MW	
511-07	Drainage Pumps P&ID	MW	
511-08	Existing Panel Modifications/Demolition	MW	
511-09	Existing Interface Loop Diagrams - I	MW	
511-10	Existing Interface Loop Diagrams - II	MW	
511-11	Existing Interface Loop Diagrams - III	MW	
511-12	Existing Interface Loop Diagrams - IV	MW	
511-13	Existing Interface Loop Diagrams - V	MW	
	<u>Flow Control Structure</u>		
	(None)		
	<u>Riverside Headhouse</u>		
	(None)		
	<u>Utility Water Pump Station</u>		
541-01	Utility Water Pump Station P&ID	MW	
	<u>New Sump 2A Pump Station</u>		
561-01	Dry Weather Trash Racks P&ID	MW	
561-02	Wet Weather Bar Screens P&ID	MW	
561-03	Regional Pumps P&ID	MW	
561-04	CWTP Pumps P&ID	MW	
561-05	Drainage Pumps P&ID	MW	
561-06	Support Systems P&ID	MW	
	<u>Standby Power Building</u>		
571-01	Engine-Generator P&ID	MW	
571-02	Diesel Fuel System P&ID	MW	
	<u>Combined Sewer System</u>		
591-01	CSS Monitoring Stations - I P&ID	MW	
591-02	CSS Monitoring Stations - II P&ID	MW	
591-03	CSS Monitoring Stations - III P&ID	MW	
591-04	CSS Monitoring Stations - IV P&ID	MW	
591-05	CSS Monitoring Stations - V P&ID	MW	
	<u>General</u>		
GI-01	Instrument Symbols & Abbreviations - I	MW	
GI-02	Instrument Symbols & Abbreviations - II	MW	
GI-03	Instrument Symbols & Abbreviations - III	MW	
GI-04	Control System Block Diagram	MW	
GI-05	PLC Panel Elevations	MW	
GI-06	Instrumentation Standard Details - I	MW	
GI-07	Instrumentation Standard Details - II	MW	

Code	Description	Company Officer \$11.60 Hourly Rate Hours Amount	Prin. Professional \$146 Hourly Rate Hours Amount	Sup. Professional \$103 Hourly Rate Hours Amount	Sen. Professional \$92 Hourly Rate Hours Amount	Senior Designer \$88 Hourly Rate Hours Amount	Designer \$81 Hourly Rate Hours Amount	CAD \$28 Hourly Rate Hours Amount	Administrative \$75 Hourly Rate Hours Amount	MJV Labor Subtotal	Sub-consultant Description Amount	Description Amount	Other Direct Costs Amount	Total	Code
T501	Preconstruction Conference	8	\$1,280							\$1,280		Expenses	\$100	\$1,400	T501
T502	Weekly Progress Meetings	400	\$58,400							\$58,400		Expenses	\$3,100	\$61,500	T502
T503	Technical Meetings	480	\$70,100							\$70,100		Expenses	\$2,300	\$72,400	T503
T504	Project Closeout	16	\$2,560							\$2,560		Expenses	\$100	\$2,660	T504
OE01	Office Engineering Services														OE01
	Normal Review														
	OM	160	\$18,560							\$18,560		Expenses	\$1,500	\$20,060	
	Structural	40	\$4,100							\$4,100		Expenses	\$1,500	\$5,600	
	Mechanical	160	\$23,460							\$23,460		Expenses	\$1,500	\$24,960	
	Electrical	160	\$23,460							\$23,460		Expenses	\$1,500	\$24,960	
	Instrumentation	360	\$52,680							\$52,680		Expenses	\$1,500	\$54,180	
	OM	80	\$9,280							\$9,280		Expenses	\$500	\$9,780	
	Structural	20	\$2,100							\$2,100		Expenses	\$500	\$2,600	
	Architectural	20	\$2,100							\$2,100		Expenses	\$500	\$2,600	
	Mechanical	120	\$17,500							\$17,500		Expenses	\$1,100	\$18,600	
	Electrical	70	\$10,280							\$10,280		Expenses	\$1,100	\$11,380	
	Instrumentation	40	\$4,100							\$4,100		Expenses	\$1,100	\$5,200	
	Charge Open	100	\$23,400							\$23,400		Expenses	\$1,500	\$24,900	
	OM	80	\$9,280							\$9,280		Expenses	\$500	\$9,780	
	Structural	24	\$2,520							\$2,520		Expenses	\$500	\$3,020	
	Architectural	80	\$11,700							\$11,700		Expenses	\$1,100	\$12,800	
	Mechanical	16	\$2,300							\$2,300		Expenses	\$1,100	\$3,400	
	Electrical	40	\$4,100							\$4,100		Expenses	\$1,100	\$5,200	
	Instrumentation	80	\$9,280							\$9,280		Expenses	\$1,100	\$10,380	
	OM	80	\$9,280							\$9,280		Expenses	\$1,100	\$10,380	
	Structural	8	\$800							\$800		Expenses	\$1,100	\$1,900	
	Architectural	80	\$11,700							\$11,700		Expenses	\$1,100	\$12,800	
	Mechanical	80	\$11,700							\$11,700		Expenses	\$1,100	\$12,800	
	Electrical	80	\$11,700							\$11,700		Expenses	\$1,100	\$12,800	
	Instrumentation	80	\$11,700							\$11,700		Expenses	\$1,100	\$12,800	
	Factor Site Visits	80	\$11,700							\$11,700		Expenses	\$1,100	\$12,800	
	Geotechnical Services	16	\$1,600							\$1,600		Expenses	\$1,100	\$2,700	
	Programming	760	\$78,300							\$78,300		Expenses	\$2,000	\$80,300	
	Record Drawings	48	\$4,900							\$4,900		Expenses	\$1,100	\$6,000	
	OM	40	\$4,900							\$4,900		Expenses	\$1,100	\$6,000	
	Structural	108	\$11,280							\$11,280		Expenses	\$1,100	\$12,380	
	Architectural	120	\$12,480							\$12,480		Expenses	\$1,100	\$13,580	
	Mechanical	120	\$12,480							\$12,480		Expenses	\$1,100	\$13,580	
	Electrical	108	\$11,280							\$11,280		Expenses	\$1,100	\$12,380	
	Instrumentation	31	\$3,190							\$3,190		Expenses	\$1,100	\$4,290	
	OAM Services														
	Operations Manual Outline	20	\$2,100							\$2,100		Expenses	\$200	\$2,300	OM01
	Dist. Operations Manual	4	\$400							\$400		Expenses	\$200	\$600	OM02
	Final Operations Manual	180	\$18,500							\$18,500		Expenses	\$1,200	\$19,700	OM03
	Technical Manual	4	\$400							\$400		Expenses	\$200	\$600	OM04
	Start-up Assistance	120	\$12,480							\$12,480		Expenses	\$700	\$13,180	OM05
	Startup Training	32	\$4,700							\$4,700		Expenses	\$500	\$5,200	OM06
	Project Management														
	Project Management	540	\$6,400							\$6,400		Expenses	\$6,200	\$12,600	
	Support Services Total		\$322,200					\$23,500	\$189,700	\$1,023,100	\$207,600		\$75,200	\$1,304,000	

City of Sacramento
 Sump 2 Rehabilitation and Improvement Project
 Phase 1 Design Development
 Phase 2 Final Design
 MBE/WBE Participation

City of Sacramento					
Sump 2 Improvements Project					
Subconsultant Summary					
Design Development					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$112,000	Easton	\$27,000	ATC Associates	\$2,500
Villalobas	\$6,000	Roberts	\$33,000	Dodson	\$45,000
Psomas	\$44,000	Koski Sullivan	\$2,000	Taylor	\$28,000
Beyaz & Patel	\$19,000			Westin	
Total	\$181,000		\$62,000		\$75,500
Percent	18.2%		6.2%		3.1%
Goal	10.57%		9.5%		NA
Final Design / Bidding Support					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$5,000	Easton	\$149,000	ATC Associates	\$2,000
Villalobas	\$8,000	Roberts	\$0	Dodson	\$342,000
Psomas	\$5,000	Koski Sullivan	\$5,000	Taylor	\$87,000
Beyaz & Patel	\$144,000				
Total	\$162,000		\$154,000		\$431,000
Percent	6.7%		6.3%		17.7%
Goal	10.57%		9.5%		NA
Support Services During Construction					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$10,000	Easton	\$26,000	ATC Associates	\$0
Villalobas	\$3,000	Roberts	\$0	Dodson	\$66,000
Psomas	\$0	Koski Sullivan	\$3,000	Taylor	\$26,000
Beyaz & Patel	\$52,000				
Total	\$65,000		\$29,000		\$92,000
Percent	5.0%		2.2%		7.0%
Goal	10.57%		9.5%		NA
Sump 2 Improvements Total					
MBE	Amount	WBE	Amount	Other	Amount
AGS	\$127,000	Easton	\$202,000	ATC Associates	\$4,500
Villalobas	\$17,000	Roberts	\$33,000	Dodson	\$453,000
Psomas	\$49,000	Koski Sullivan	\$10,000	Taylor	\$141,000
Beyaz & Patel	\$215,000				
Total	\$408,000		\$245,000		\$598,500
Percent	8.6%		5.2%		12.6%
Goal	10.57%		9.5%		NA